## ARTS IMPACT LESSON PLAN

Visual Arts and Math Infused Lesson

Lesson One: Line Direction and Length

Author: Meredith Essex Grade Level: First

Enduring Understanding

Changing direction and length of lines can create variety in composition.

Lesson Description (Use for family communication and displaying student art)

Students explore line direction and length through imaginary air-drawing. Students then look at examples

of art and identify vertical, horizontal, and diagonal lines. Next, students find, compare, and order lengths

of lines (short, medium, long) observed in art. Students create a composition guided by a set of directives

with focus on creating lines in different directions and in different lengths. Last, students compare lines

using a third object and reflect on line length, direction, and how they can create variety in composition.

Learning Targets and Assessment Criteria

Target: Compares and orders lengths of line.

Criteria: Identifies short, medium, and long lines in art.

Target: Creates variety with line direction and length.

Criteria: Draws vertical, horizontal, and diagonal lines that are short, medium, and long.

Target: Measures lines indirectly.

Criteria: Compares object to lines and identifies similar, larger, and smaller.

Vocabulary Materials Learning Standards

Arts Infused:

Diagonal

Horizontal

Line direction

Long

Medium

Short

Vertical

Math:

Length

Measure

Unit

Arts:

Composition

Variety

Museum Artworks or Performance:

Seattle, WA

Seattle Art Museum

Tacoma, WA

Children’s Museum of Tacoma

Tacoma Art Museum

Materials

Warm/neutral colored Canson Mi-teintes

paper: 6x8” (practice) and 8x12” (final

composition); Conté crayons: white and

sanguine; Drawing pencil: 4B; Popsicle

sticks; Yardstick; Arts Impact

sketchbooks; Art mats; Class

Assessment Worksheet

Connections

Everyday Mathematics

2.7 – Exploring Lengths, Straightedges,

and Dominoes

continued

WA Arts State Grade Level Expectations

For the full description of each WA State Arts Grade Level

Expectation, see: http://www.k12.wa.us/Arts/Standards

1.1.1 Elements: Line direction, length

1.1.7 Principles of Design: Variety

1.2.1 Skills and Techniques: Drawing

2.1.1 Creative Process

2.3.1 Responding Process

4.2.1 Connection between Visual Arts and Math

Early Learning Guidelines (Pre-K – Grade 3)

For a full description of Washington State Early Learning and

Child Development Guidelines see:

http://www.del.wa.gov/development/guidelines/

(Age 4-5) 6. Learning about my world: Math: Use measuring

tools in play; compare size, describe objects using size

words; order three objects by one characteristic (such as

from smallest to largest).

(1st grade) 6. Learning about my world: Arts: Create and

respond to arts.

Common Core State Standards (CCSS) in Math

For a full description of CCSS Standards by grade level see:

http://www.k12.wa.us/CoreStandards/Mathstandards/

1.MD.1. Order three objects by length; compare the length

of two objects indirectly using a third object.

CCSS Mathematical Practices

MP 4. Model with mathematics.

MP 5. Use appropriate tools strategically.

MP 6. Attend to precision.

MP 7. Look for and make use of structure.

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Seattle Art Museum images

Fisherman's Wharf, 1950, Richard

Kirsten, 50.162

Hollow Log, 1995, Australian

Aborigine, 2005.152

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Pre-Teach

Sketchbook Activity: Practice drawing lines in different directions. Practice

making short, medium, and long lines. Make a row of lines from short to long

and from long to short.

Lesson Steps Outline

1. Warm-Up: Demonstrate and guide making different directions and lengths of

lines in the air. Guide students to respond to combinations of direction and

length: short vertical lines…long horizontal lines, etc.

2. Introduce and guide student pairs identifying vertical, horizontal, and

diagonal lines in Fisherman’s Wharf by Richard Kirsten and Hollow Log created

by Aboriginal artists of Australia from the Seattle Art Museum collection.

 Criteria-based teacher checklist: Identifies short, medium, and long lines

in art.

3. Demonstrate creating a composition by dividing the space with vertical,

horizontal, and diagonal lines using a white conté crayon. Share multiple

examples that share the same criteria, but look very different. Guide students

as they draw vertical, horizontal, and diagonal lines.

 Criteria-based process assessment, room scan: Draws vertical, horizontal,

and diagonal lines.

4. Demonstrate choosing and filling areas of the composition with different

lengths of directional lines using graphite pencil and rust colored conté crayon.

 Criteria-based teacher checklist: Draws vertical, horizontal, and diagonal

lines that are short, medium, and long.

5. Guide indirect measurement using a third object for comparison.

 Criteria-based teacher checklist: Compares object to lines and identifies

similar, larger, and smaller.

6. Lead criteria-based group reflection and self-assessment.

 Criteria-based student self-assessment, reflection: Draws vertical, horizontal,

and diagonal lines that are short, medium, and long. Reflects on lines in art.

ICON KEY:

3 = Indicates note or reminder for teacher

 = Embedded assessment points in the lesson

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LESSON STEPS\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Warm-Up: Demonstrate and guide making different directions and lengths of lines in the

air. Guide students to respond to combinations of direction and length: short vertical

lines…long horizontal lines, etc.

• Draw imaginary vertical lines (up and down direction).

• Draw imaginary horizontal lines (side to side direction).

• Draw imaginary diagonal lines (corner to corner direction).

• Now make short lines, medium lines, and long lines.

• Now lets combine direction and length…make short diagonal line….make a long vertical

line…make a medium diagonal line, etc.

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2. Introduce and guide student pairs identifying vertical, horizontal, and

diagonal lines in Fisherman’s Wharf by Richard Kirsten and Hollow Log created

by Aboriginal artists of Australia from the Seattle Art Museum collection.

Responding to Art in

the Classroom

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3 The Seattle Art Museum’s collection is available on-line at:

http://www.seattleartmuseum.org/emuseum/code/collection.asp. To find the images in this lesson,

enter the accession number for the work of art in the search box on the collections page of SAM’s

website. Accession numbers for these works of art are listed in the materials box at the beginning of

the lesson.

• Artists make lines in different directions and lengths in compositions to create variety—to make

their art interesting to look at.

• Work with a partner to find examples of vertical, horizontal, or diagonal lines in the art.

• Now find lines in the art that are short, medium, and long.

3 Students can compare a ruler or yardstick with lines in projected images.

 Criteria-based teacher checklist: Identifies short, medium, and long lines in art.

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3. Demonstrate creating a composition by dividing the space with vertical,

horizontal, and diagonal lines (equal or different lengths) using a white conté

crayon. Share multiple examples that share the same criteria, but look very

different.

• Decide first whether your paper will be vertical or horizontal.

• Draw three vertical lines top edge to bottom edge of your paper.

Think about having different size spaces in-between.

• Now make three horizontal lines that touch your vertical lines—

they do not have to touch the edges of the paper.

• Now make three diagonal lines that touch your vertical or

horizontal lines—they do not have to touch the edges of

the paper.

 Criteria-based process assessment, room scan: Draws vertical, horizontal, and diagonal lines.

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4. Demonstrate choosing and filling areas of the composition with different lengths of

directional lines using graphite pencil and rust colored conté crayon.

• Thoughtfully choose some places in your drawing you want to stand out. Fill those

areas with vertical, horizontal, or diagonal lines.

• Think about repeating and combining lines in pencil and white

and rust colored conté crayon within those places you want to

stand out.

• Look closely at the art we have studied so far. It can give you

ideas for ways to add lines to areas in your composition.

• Check to see that you have short, medium, and long vertical,

horizontal, and diagonal lines in your composition.

 Criteria-based teacher checklist and student self-assessment: Draws vertical, horizontal, and

diagonal lines that are short, medium, and long.

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5. Guide indirect measurement using a third object

for comparison.

• Using a popsicle stick to compare, find a line that is longer. Find

a line that is shorter. Find a line that is similar in length.

 Criteria-based teacher checklist: Compares object to lines and

identifies similar, larger, and smaller.

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Creating Line and Value

with Conte’ Crayons

Prompting for Creativity

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6. Lead criteria-based group reflection and self-assessment.

• Look closely and point to your shortest vertical line…a medium vertical line…

your longest vertical line…

• Look closely and point to your shortest horizontal line…a medium horizontal line…

your longest horizontal line…

• Look closely and point to your shortest diagonal line…a medium diagonal line…your longest

diagonal line…

• Notice and describe where artists used line to make parts of their composition stand out.

 Criteria-based student self-assessment, reflection: Draws vertical, horizontal, and diagonal lines that

are short, medium, and long. Reflects on lines in art.

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Everyday Mathematics Extensions:

4.2 – 4.6 Standard and Non-standard Measurement

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Guiding Reflecting on

Student Art

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ARTS IMPACT LESSON PLAN Visual Arts and Math Infusion

First Grade Lesson One: Line Direction and Length

CLASS ASSESSMENT WORKSHEET

Disciplines VISUAL ARTS AND MATH Total

Concept Measurement Line Direction Measurement 4

Criteria

Students

Identifies short,

medium and long

lines in art.

Draws vertical,

horizontal and

diagonal lines.

Makes lines that are

short, medium and

long.

Compares object to

lines and identifies

similar, larger and

smaller.

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Total

Percentage

What was effective in the lesson? Why?

What do I want to consider for the next time I teach this lesson?

What were the strongest connections between visual arts and math?

Teacher: Date:

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ARTS IMPACT FAMILY LETTER

VISUAL ARTS AND MATH LESSON: Line Direction and Length

Dear Family:

Today your child participated in an Arts and Math lesson. We talked about how artists use math and

measurement to create art. We looked at paintings with all different lengths of lines moving in different

directions.

• We explored line direction by making vertical, horizontal, and diagonal lines in the air using an

imaginary tool. Then we practiced making different lengths of lines in different directions.

• We looked at a painting and traditional painted artworks by Aboriginal artists of Australia and

found lots of vertical, horizontal, and diagonal lines.

• Next, we found, compared, and ordered lengths of lines (short, medium, long) that we

observed in the art.

• We created a drawing composition guided by a set of directions for making lines in different

directions and in different lengths using special conté crayons and artist graphite pencils.

• We compare the lines in our drawing using a third object and reflected on how line length and

direction can create variety in composition.

At home, you could encourage your child to compare and measure the length of objects. Together, you

could search for and draw all different combinations of vertical, horizontal, and diagonal lines seen

inside or outside and compare their lengths.

Enduring Understanding

Changing direction and length of lines can create variety in composition.