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

LESSON TITLE: Shapes Are Everywhere

Visual Art and Math Lesson

Artist-Mentor – Meredith Essex Grade Level: Third Grade

Enduring Understanding

Math polygon shapes/figures can represent the human made world around us.

Geometry Search Journal:

Target: Observes, identifies, and compares shapes/figures.

Criteria: Examines art and still life objects and draws/labels polygons in Geometry Search

Journal.

Target: Represents objects.

Criteria: Draws tools, machines and/or toys with polygon shapes/figures by connecting and

layering geometric shapes/figures.

Target: Shows depth of shapes/figures in space in still life.

Criteria: Overlaps objects in drawing with closest objects covering part of objects farther away

and identifies/labels math shapes/figures seen in objects.

Teaching and Learning Strategies

Introduction to Arts-Infused Concepts through Classroom Activities:

Arts-Infused Concepts: Properties/Attributes of Polygons

· Review properties/attributes of different shapes/figures: numbers of sides and lengths of sides.

· Classroom shape/figure search: Find, name, and record shape/figures in Geometry Search Journal.

· Practice drawing a wide variety of polygons.

· Practice drawing polygons oriented in different directions.

1. Introduces Duet V from the Onion series by David Shratter from Tacoma Art Museum.

Prompts: This is a lesson that is a visual art lesson and a math lesson at the same time. Shapes/figures

from math are everywhere, and are used in art to represent the world around us. What shapes/figures

do you see in this art? Add the math shapes/figures/polygons you see in the art to your Geometry

Search Journal, and label them with their geometry shape/figure name. Today we will be using

shapes/figures to draw a still life—a collection of objects. Your job is to look at them very closely. We

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will start with one object at your cluster of desks that is part of the whole still-life for your group. Draw

and label all of the shapes/figures you see: the outside shapes/figure, and the shapes/figures you see

inside of the object. Especially look for polygon shapes/figures from math as well as other

shapes/figures. Compare objects and the kinds of shapes/figures you have found. Did one of your

classmates find a polygon you did not see at first?

Student: Examines art and two still life objects; records shapes/figures in Geometry Search Journal.

Compares shapes/figure notations by comparing drawings and shape/figure labels with a partner.

Embedded Assessment: Criteria-based peer critique

2. Demonstrates drawing still-life. Prompts: What is the most important thing an artist does to get

ready to draw? Observe! Using our lightest, H pencil, I am looking much more at the still life (Look at

the paper 20% of the time and the object 80% of the time). Notice the missing eraser on your drawing

pencil. . . .remember that artists make changes, not mistakes! Notice that I am very lightly drawing

in the shapes/figures I see in front of me. I’m looking for polygon shapes/figures (triangles,

squares, rectangles, parallelograms), as well as other shape/figures that may not have math names. I

am thinking about every object as a combination of shape/figures (instead of an outline) that I build

through connecting and layering shapes/figures. How am I showing that some objects are close and

some farther away? I am overlapping the shapes/figures: do I see the whole object behind the

one that is closer to me? No—find overlapping in this room where part of something is covered by

something else. . . . I will only show where parts of objects are seen, not the parts of shapes/figures

that are behind other objects. I’m looking for the math shapes/figures I see in parts of objects. Is there

a triangle? A square? A multi-sided figure (polygon) that comes into sight when it is overlapped with

another shape/figure?

Student: Observes demonstration, discusses examples of overlapping in classroom.

3. Guides students in drawing still-life. Prompts: Each group of five to six students has a still life

in the center of their desks. Every student will have a different point of view since they are sitting in a

different spot. Focus on the objects only: remember start drawing very lightly and so large the still life

shapes/figures touch the edges of your paper. Define the shapes/figures you see with care to show

only what you see. Remember that parts of the still life will not be showing because they are

overlapped by other objects. Are there still some shapes from your math knowledge? Which ones? Do

you will see some specific polygons? Triangles? Rectangles? Add as much detail as you can by

adding shapes inside of shapes/figures and patterns or lines you observe. Self check: Point

to a polygon in your drawing; point to a place where you showed overlapping.

Student: Draws still-life.

Embedded Assessment: Student self-assessment.

4. Facilitates criteria-based reflection: Displays drawings. Prompts: Describe any math or polygon

shapes/figures that you can add to your Geometry Search Journal. Did you notice the math

shapes/figures when you drew the whole still life, or do you notice them now, in other student’s

drawings? Find two drawings that show an object in different positions: is it overlapped in both (closer,

farther away?) Where did you overlap in your drawing?

Student: Participates is critique.

Embedded Assessment: Criteria-based class critique

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BEFORE next VISUAL ART lesson:

Math Centers

1. Cut out a picture from a magazine or other printed material that contains polygon

shapes/figures: triangle, square, rectangle, parallelogram, and glue the picture into a

Geometry Search Journal. Label the shapes/figures found with their math names and the

amount of sides. Switch with a neighbor and see if they missed seeing any polygon

shapes/figures!

2. Build a tool, toy or machine by connecting pattern blocks. Make a list of math

shapes/figures that are polygons used for each part of the tool, toy or machine.

3. Continue to practice by drawing parts of the building, furniture, objects that have

polygons in them.

Independent Practice: Air draw the shapes around you! Name the polygons! Triangles,

squares, rectangles, parallelograms—shapes/figures are everywhere! Just look around

you, count the sides and name them!

Vocabulary Materials and Community Resource WA Essential Learnings & Frameworks

Arts:

composition

line

overlap

still life

Arts Infused:

circle

geometric shape

polygon

rectangle

shape

sides

square

triangle

Museum Artworks:

David Shratter, Duet V, from the Onion Series, 2002

Art Materials:

drawing pencils: 2B

Geometry Search Journals

white vinyl or art gum erasers

Geometry Search Journals

9x9 in. white drawing paper

Tools:

kitchen utensils

carpentry tools

Machines:

calculators, phones, tech-gadgets, tiny motors,

interior components from household machines—

cameras

Toys:

vehicles with polygon shapes: cars with rectangles

AEL 1.1 concepts: shape, space/overlapping

AEL 1.2 skills and techniques: drawing

AEL 4.2 connections between arts and other content

areas: geometry

Math State Frameworks

Grade 2: uses a 2D shape that matches a set of

characteristics

Grade 3: describes and compares congruent 2D

figures; draws a shape that is congruent to a given

2D shape

Math

Math

Math

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ASSESSMENT WORKSHEET

Disciplines VISUAL ART AND MATH VISUAL ART Total

Concept SHAPE SPACE 4

Students Examines art and

still life objects and

draws/labels

polygons in

Geometry Search

Journal

Draws tools, machines

and/or toys with polygons

shapes/figures by

connecting and layering

geometric shapes/figures

Overlaps objects in

drawing with closest

objects covering part

of objects farther

away

Identifies/

labels math polygon

shapes/figures

seen in objects

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

13.

14.

15.

16.

17.

18.

19.

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21.

22.

23.

24.

25.

26.

27.

28.

Total

Percentage

Criteria-based Reflection Questions:

Self-Reflection: Describe any new shapes/figures that you can add to your Geometry Search

Journal. When did you notice them? In the still life? Student’s drawings? Find two drawings that

show polygons?

Peer to Peer: Switch objects with a partner, draw and label the polygon shapes/figures you

see. Compare! Which math shapes/figures did you see? What makes them similar or different?

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:

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ARTS IMPACT—ARTS-INFUSED LEARNING FAMILY LETTER

VISUAL ART AND MATH – Shapes are Everywhere

Dear Family:

Today your child participated in a visual art and math lesson.

• We talked about a still-life painting by David Shratter. We looked for math polygon

shapes/figures in the art and in still0life objects we drew. We drew and labeled math

shapes/figures and their properties/attributes (number and length of sides) that we found in our

Geometry Search Journal.

• We drew tools, machines and toys by connecting and layering geometric shapes/figures,

paying particular attention to looking for polygons.

• We overlapped objects in our drawing to show depth in space: the closest objects covered

part of objects that were farther away. Sometimes new polygons emerged when shapes/figures

of objects overlapped.

You could start a Geometry Search Journal at home to record the shapes/figures you see everywhere,

every day. You could even staple together the backs of used papers as your journal.

Enduring Understanding

Math polygon shapes/figures can represent the human made world around us.