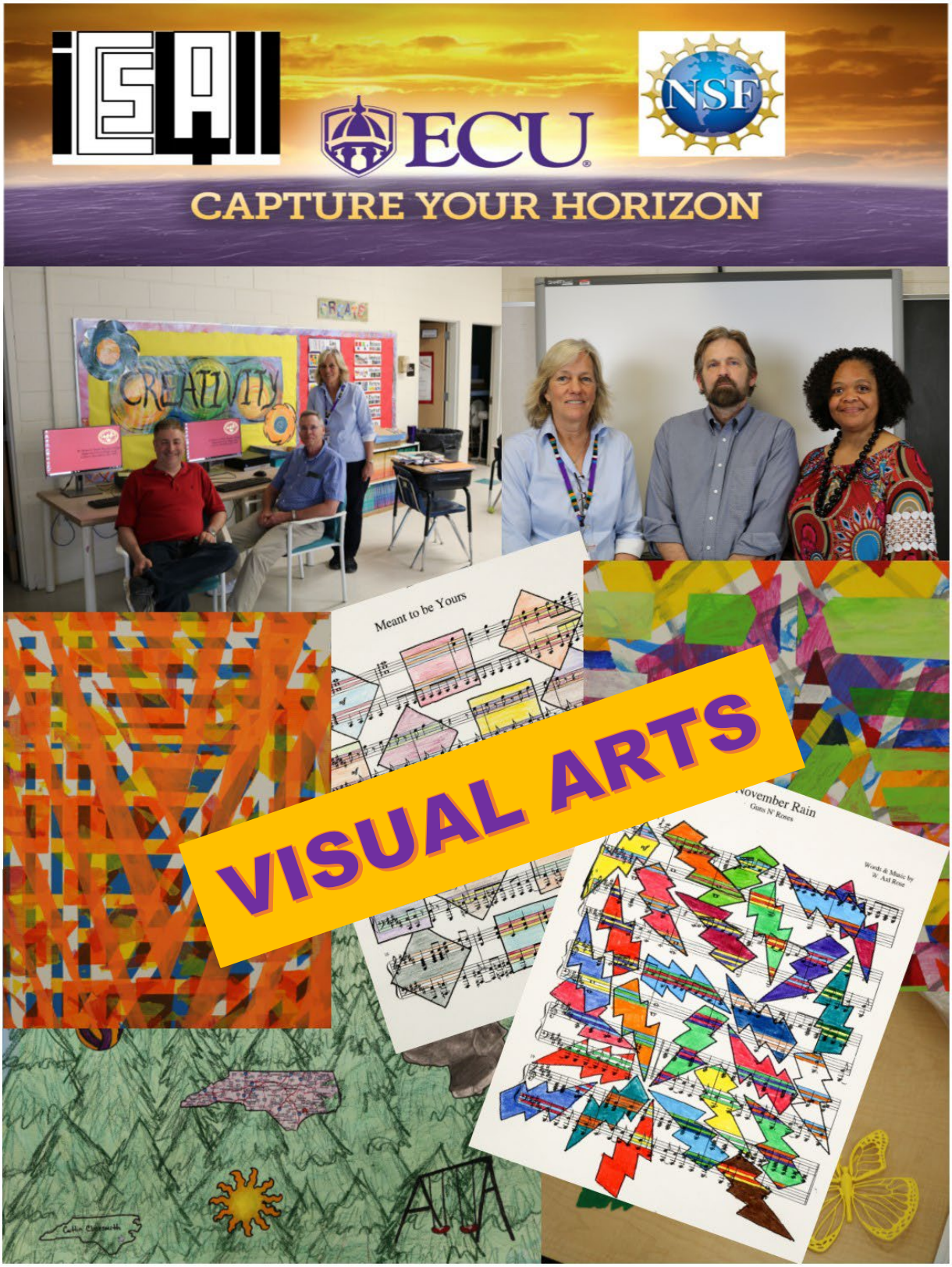
iSAll
ECU
NSF
CAPTURE YOUR HORIZON
CREATIVITY
Meant to be Yours
November Rain
VISUAL ARTS

# Integrating Computer Science for All with Visual Arts in Three Rural Eastern North Carolina School Districts

# Curricular Activity System

**R. Martin Reardon, Anne Haugh, Amber Christensen, Claire D. Webb, Kristen Puckett, Ronnie Smith, Bobby Hoggard**

***I am from . . .***

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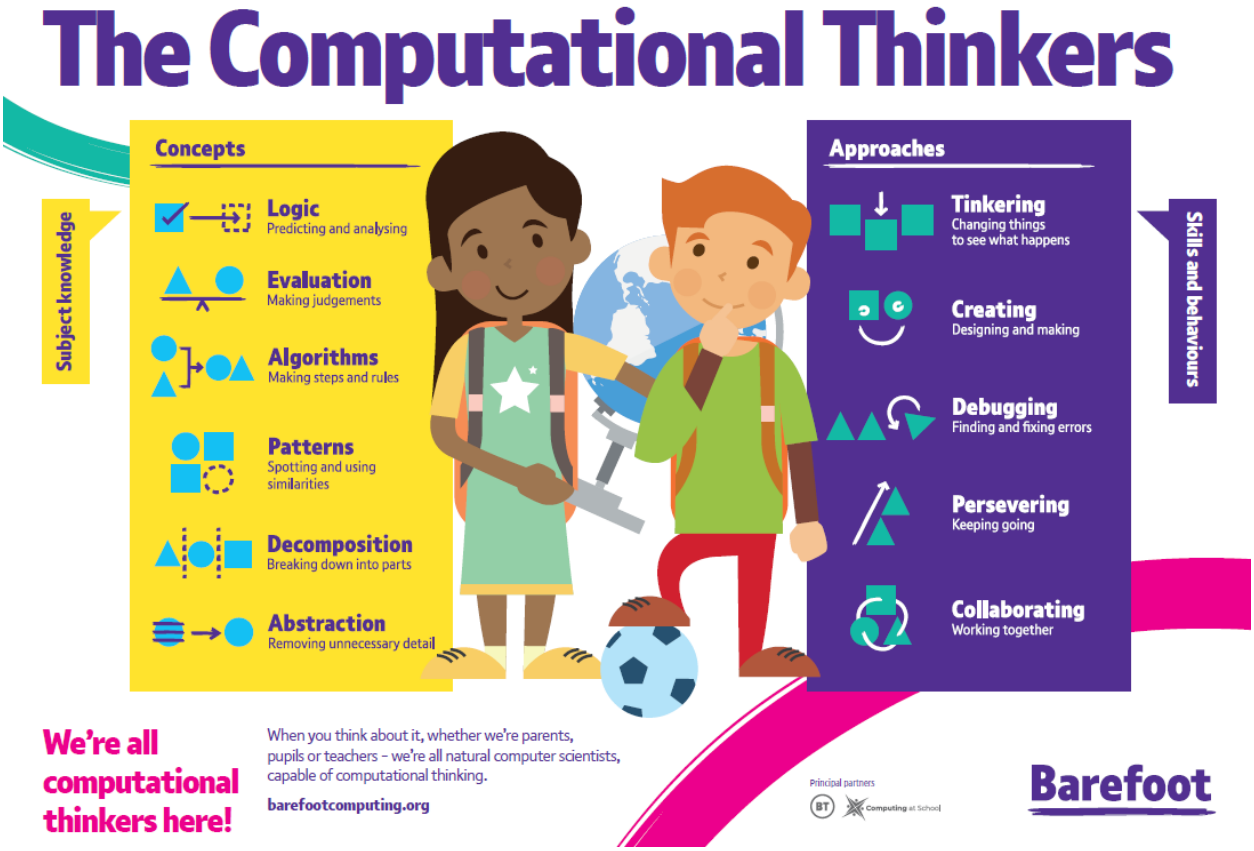



https://bit.ly/3azo9az

With the permission of Computing at School's *Barefoot* initiative (https://barefootcas.org.uk/), we have adopted both the concepts implicated in computational thinking and the approaches most likely to be adopted fruitfully by an individual who is engaged in computational thinking.

## Computational Thinking (CT) Concepts

While adopting the Computing at School's *Barefoot* initiative's concepts and approaches, we have opted to use a different set of icons to associate with each. For each element of the curricular activity system, we designate which of the processes we believe to be primarily implicated in students' responses.

**Logic:** Helps to establish and check facts, and make predictions

**Algorithms:** A precise sequence of instructions, or set of rules, for performing a task

**Decomposition:** Breaking down a problem or system into parts

**Patterns:** By spotting patterns, one can make predictions, create rules, and solve other problems

**Abstraction:** Identifying what is important and leaving out detail we do not need

**Evaluation:** Make judgements based on different factors, such as design criteria and user needs

## Computational Thinking (CT) Processes

The students are invited to self-assess which of these processes they used and the extent to which they used them at the conclusion of each of the elements of our curricular activity system.

**Tinkering:** Trying things out through experimentation

**Creating:** Planning, making, and evaluating things (e.g., animations, games, robotics)

**Debugging:** Finding out what is wrong in an algorithm or program and fixing it

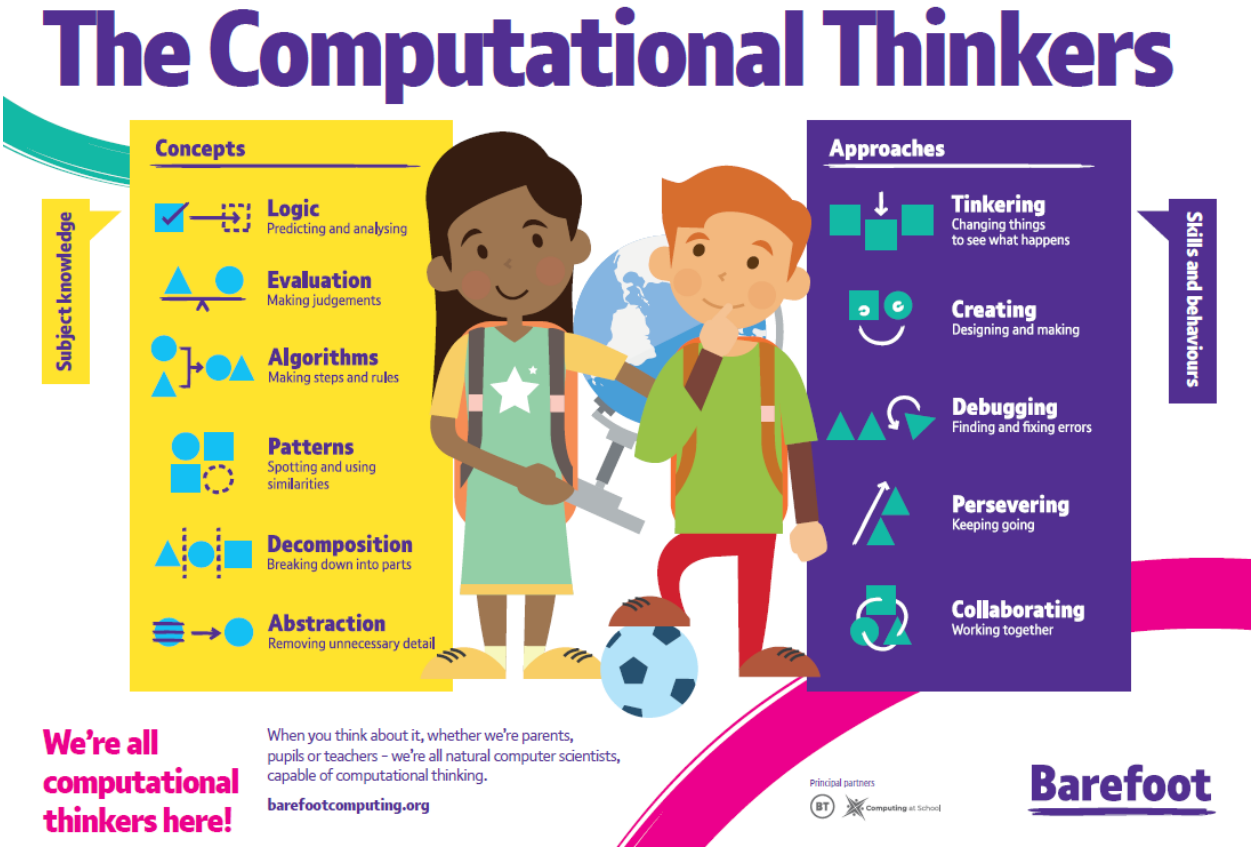
**Persevering:** Never giving up, being determined, resilient, and tenacious

**Collaborating:** Working with others to ensure the best result

# Integrating Computational Thinking into Grade Eight Visual Art Curriculum: Activity Guide

# CAS V1: Introducing Computational Thinking

**Objective:** This introductory lesson is designed to introduce Computational Thinking terms while implementing strategies that will be used throughout subsequent lessons.

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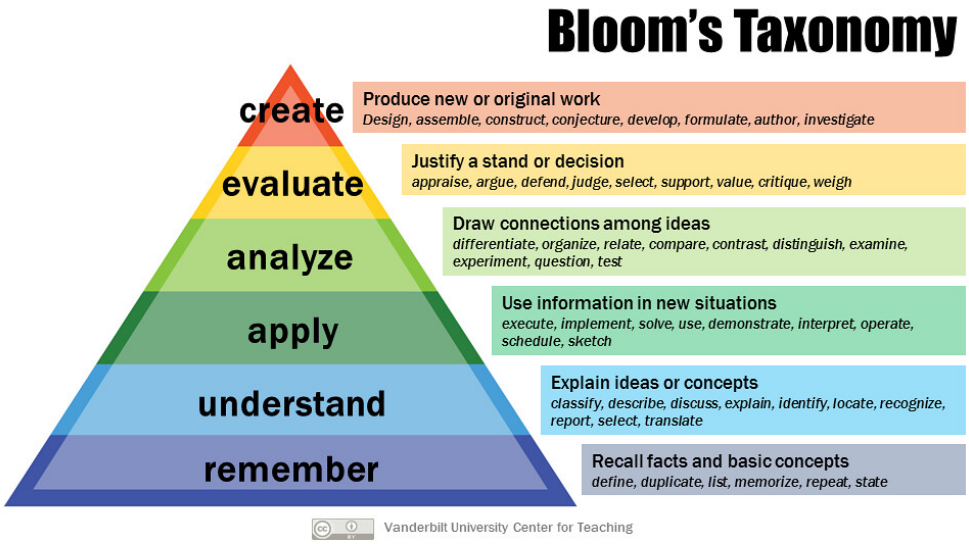
**NC Standards:**

- **8.CX.2.2** Analyze skills and information needed from visual arts to solve problems in art and other disciplines
- **8.CX.2.3** Use collaboration to arrive at effective solutions to identified problems

**21st Century Skills:** Creativity and Innovation, Critical Thinking and Problem Solving, Communication and Collaboration, Productivity

**Blooms Taxonomy:** Remember, Understand, Apply, Analyze, Evaluate, Create

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## Lesson Outline

The purpose of this exercise is to introduce the Computational Thinking terminology through active participation of the students. This could be accomplished in one class period.

Prior to the activity, you could have students write down what comes to mind when they hear Computational Thinking, computers and technology. Have them put this aside to reference later.

Prior to any explanation or discussion of Computational Thinking, divide your students into groups of 4-5. Each group will be given a simple puzzle. *(Possibilities are the Dollar Store puzzles with anywhere from 25-50+ pieces)*

*Retrieved from: https://bit.ly/3h1zzX9*

Students should be instructed to solve the puzzle in a timely manner.

As puzzles are completed, begin the discussion asking the students to talk about what they just did (being in middle school, they will probably start with saying, “we put together a puzzle”).

Encourage them to dig a little deeper into the process about what they did. As terms and definitions are highlighted in their comments (e.g., “we worked together”, referring to collaboration), start writing the list of CT terms on the board.

At this point you can hand out a copy of the Barefoot Computing visual highlighting the terms and their definitions.

**It is important to note here that Computational Thinking is about solving problems effectively:**

*“Computational thinking is the building blocks of our digital world, with the concepts forming the basis of much computer science. Computer scientists are interested in finding the most-efficient ways to solve problems, maximizing accuracy and minimizing resources (e.g. time / space). They look for solutions which can be applied elsewhere to save resources in the future.”*

https://bit.ly/3fWHUdn

Remind students that this terminology is not used solely for math and science, but is common language relating to many of their subjects as well as daily life skills. Becoming familiar with this language and the varied processes is important in preparing them for future careers.

If time allows, students could be asked to think of other subjects/projects or daily activities and write the CT terminology that they use in these areas and how they use them. They can also finish their puzzles.

This symbol represents augmented and virtual reality. It will appear next to each assignment/activity that utilizes AR and/or VR components.

**https://bit.ly/3gVvvrg**

## Materials

Puzzles 25-50+ piece puzzles**,** Copies of Computational Thinking Terminology and their definitions

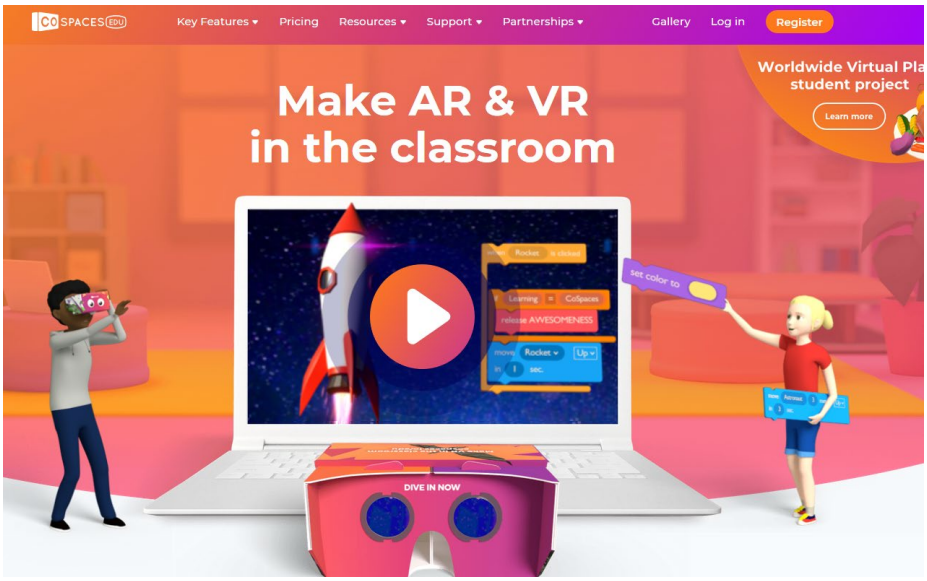
## References

Barefoot Computational Thinking

https://www.barefootcomputing.org/

**CoSpaces Edu Exploration**

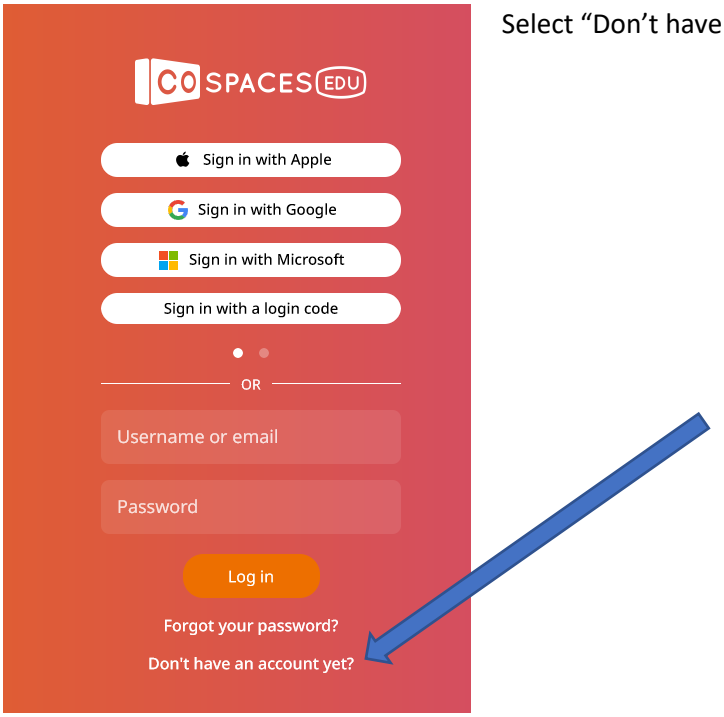
CoSpaces Edu is a cloud-based digital workspace in which you can create augmented reality (AR) and virtual reality (VR).



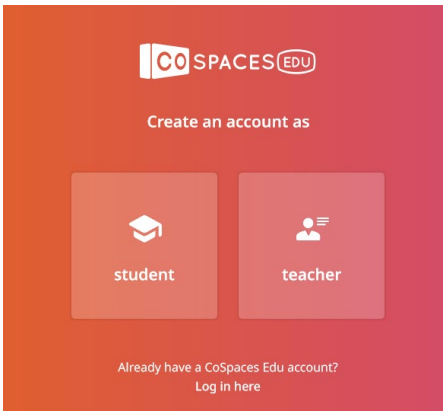

To get a sense of what AR/VR is, please view https://www.youtube.com/watch?v=zUR9i60zLo8

Now, please go to the Apple AppStore on your iPad. Search for "CoSpaces" and download the App (it's free). Your teacher may have already downloaded the CoSpaces App for you.

If you are on an iPad, you won't see the above home screen. Instead you will see:

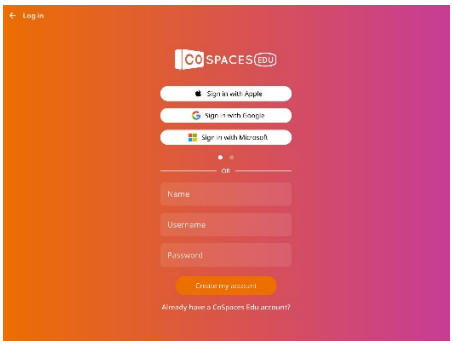



Select "Don't have an account yet?"



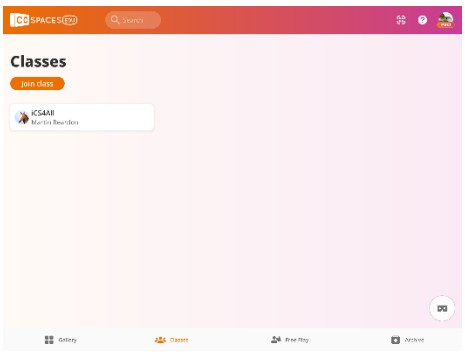

Select the student option so you can enter the class code. (should be 5 characters)


Type in your class code and click “Continue.”



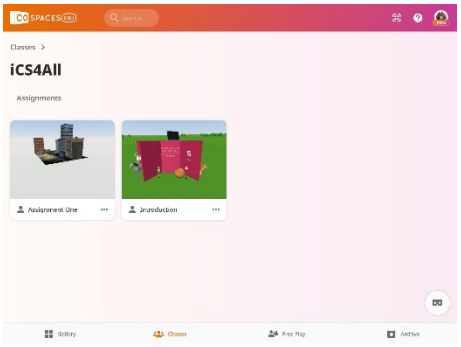

Create a username and password in collaboration with your teacher.

Click on “Create my account.”




After you have created your account, you should see a screen that looks like this except that the name of your class will be where you see “iCS4All.”

Click on the name of your class.

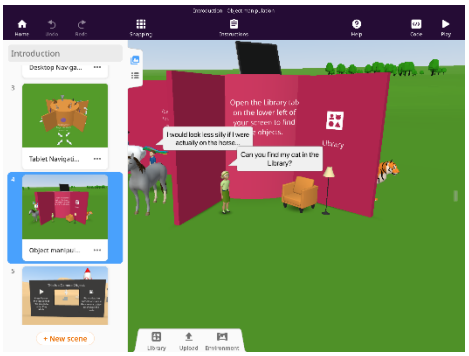



You should see a screen that looks like this except that you will see the name of your class (instead of “iCS4All”).

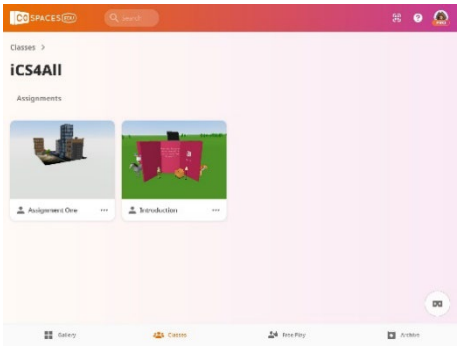
Select the “Introduction” assignment and follow the directions.

If you need to reference the instructions again, they appear in the top bar in the middle

**When you have finished working through the Introduction, start on Assignment One.**




To find Assignment One, click on the home button in the top left of your screen to bring you back to your class page




Select Assignment One and follow the instructions.

Make sure you scroll all the way to the bottom of the instructions. There are 4 components to the assignment.

**Teacher Note:**

If you or your students need more assistance in getting started, this video from CoSpaces Edu may be helpful: https://www.youtube.com/watch?v=2WWCnNjeMzM

**Computational Thinking Self-Assessment: Introduction Computational Thinking**

Which approaches did you use? On each double-headed arrow line, mark an X to show how much you used each approach. Justify your response on the two writing lines.

**Tinkering**

**MIN** ⟷ **MAX**

**Creating**

**MIN** ⟷ **MAX**

**Debugging**

**MIN** ⟷ **MAX**

**Persevering**

**MIN** ⟷ **MAX**

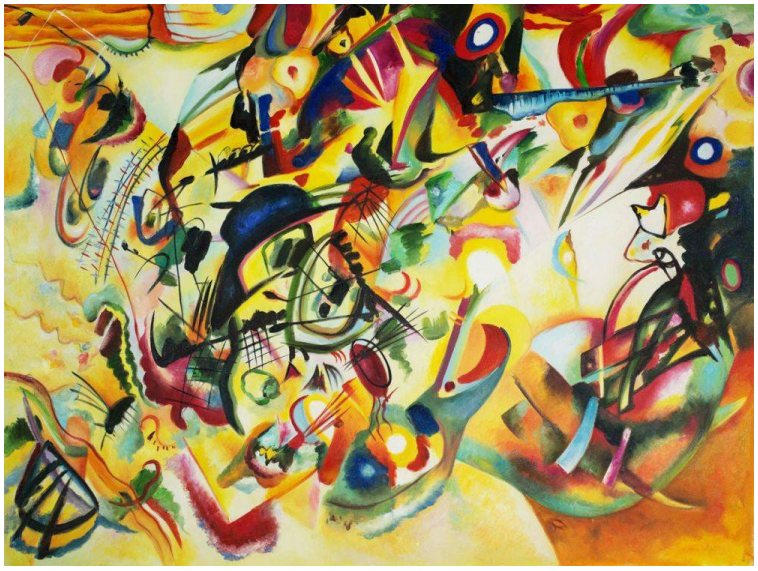
**Collaborating**

**MIN** ⟷ **MAX**

# CAS V2: Kandinsky

## The Elements of Art
## & Principles of Organization

**Objective:** For this lesson, students will create cut paper designs inspired by Wassily Kandinsky and then analyze them according to the elements of art and principles of organization.



*Composition VII, Wassily Kandinsky, Retrieved from:* https://bit.ly/31VFt5F

**NC Standards:**

- **8.V.1** Use the language of visual arts to communicate effectively
- **8.V.2** Apply creative and critical thinking skills to artistic expression
- **8.CR.1.2** Critique personal art based on identified criteria

**21st Century Skills:** Creativity and Innovation, Critical Thinking and Problem Solving, Communication and Collaboration, Information Literacy, Media Literacy

| Primary CT Concepts |
| --- |
| Algorithms, Logic, Decomposition, Evaluation, Abstraction, Tinkering, Debugging, Creating, Persevering |
| |

**Lesson Outline**

The purpose of these exercises is to review the Language of the Visual Arts. Each student should be given a copy of the Elements of Art and Principles of Organization (*attached below*). Students will first be asked to view a painting by Kandinsky titled *Yellow, Red, and Blue 1925.* Using a worksheet (*attached below*) they are to identify and draw lines and shapes. They are also to identify the colors that Kandinsky used and answer the questions regarding how he used the various elements.

*Yellow-Red-Blue, 1925, Wassily Kandinsky*
*Retrieved from: https://bit.ly/343I688*

Following this, students will create a cut paper design from their findings. They will use all the lines and shapes that they drew and redraw them on construction paper. They can use the colors they identified. Note that students will need to make lines thick in order to cut them out. Instruct them that they can alter the sizes, or repeat a shape or line, but their designs should exhibit at least six different lines and shapes. I wouldn't give much instruction on how to arrange their designs as it's important for them to check their own understanding of these concepts.

Student work can be displayed and then as you go through and explain the varied principles of organization ask the students to look at their work and see how they utilized, balance, movement, emphasis, contrast, variety and unity.

They can collect their work and finish their worksheets regarding the principles that they addressed and how they used them.

**Alternative Lesson**

An alternative or additional lesson to check their understanding of the Computational Thinking terminology could include having them write an algorithm for the steps that they used to create their designs.

Let them know that it is important to be detailed in telling what the varied shapes are and how they were arranged in the composition. They should write 2 things that are incorrect about

their designs. For example, they could say they added 3 red circles towards the outer boarders of the design when perhaps they were yellow circles or no circles at all.

These algorithms can be shared with a fellow student to check for accuracy and correct the mistakes.

**Materials**

Copies of the Elements of Art and Principles of Organization Worksheets, pencils, colored pencils, construction paper (assorted sizes and colors), glue sticks, scissors, 9x9” sheets black construction paper

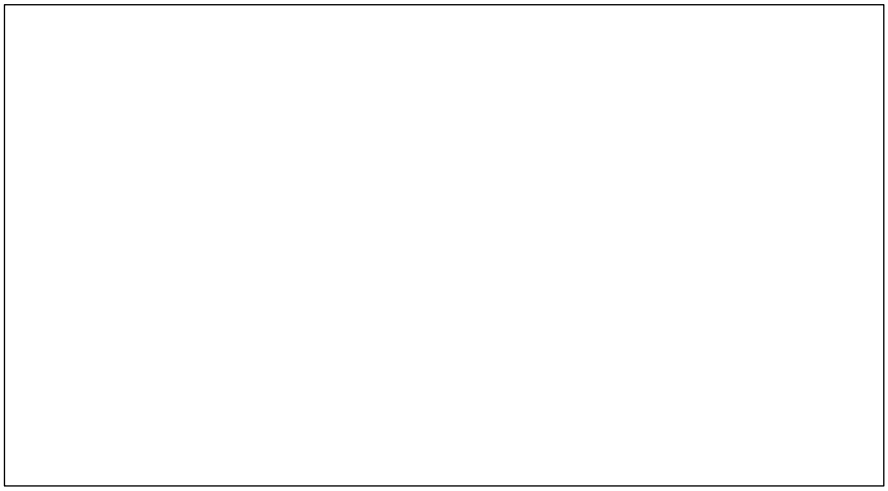
Name: _____

# Kandinsky

## The Elements of Art and Principles of Organization

For this lesson, you will be viewing the painting *Yellow, Red, and Blue* by Wassily Kandinsky. Then answer the following questions/prompts.

1. In the space below, draw 3 different kinds of lines that you see in Kandinsky's painting. You'll want to be accurate in drawing them…include thickness. It's not necessary that you place them in the exact spot as they are in his painting.

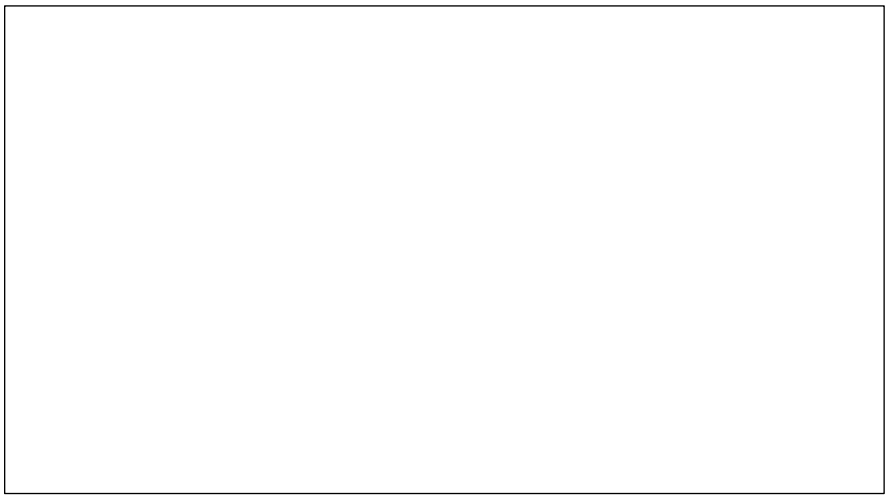


2. Describe the lines:

   _____

   _____

3. In the space below, draw 3 different shapes that Kandinsky used in the painting. Be accurate in your depiction.



4. There are 2 basic categories of shapes. Describe the shapes that Kandinsky used in his painting.

   _____

   _____

5. Is there any evidence of texture in his painting? If so, describe.

   _____

   _____

6. What colors has Kandinsky used?

   _____

   _____

7. Describe the use of color with regards to value and intensity.

   _____

   _____

8. Has he used any particular color scheme (groupings of color)? If so, name the color scheme.

   _____

   _____

9. Next you will be using the lines and shapes that you chose to create a new design, Redraw the lines on varied pieces of construction paper. You'll need to make the lines thick in order to cut them out. Do the same with the shapes, drawing them on colors of construction paper and cutting them out. You can vary the sizes and repeat any of your lines and shapes, but you should have at least 6 different images for your design.

   Arrange and glue the various shapes you've cut out on a 9x9" square of black construction paper.

10. How did you balance your design?

_____

_____

11. Did you create a point of emphasis in your design? Explain

_____

_____

12. How does your eye move throughout your design?

_____

_____

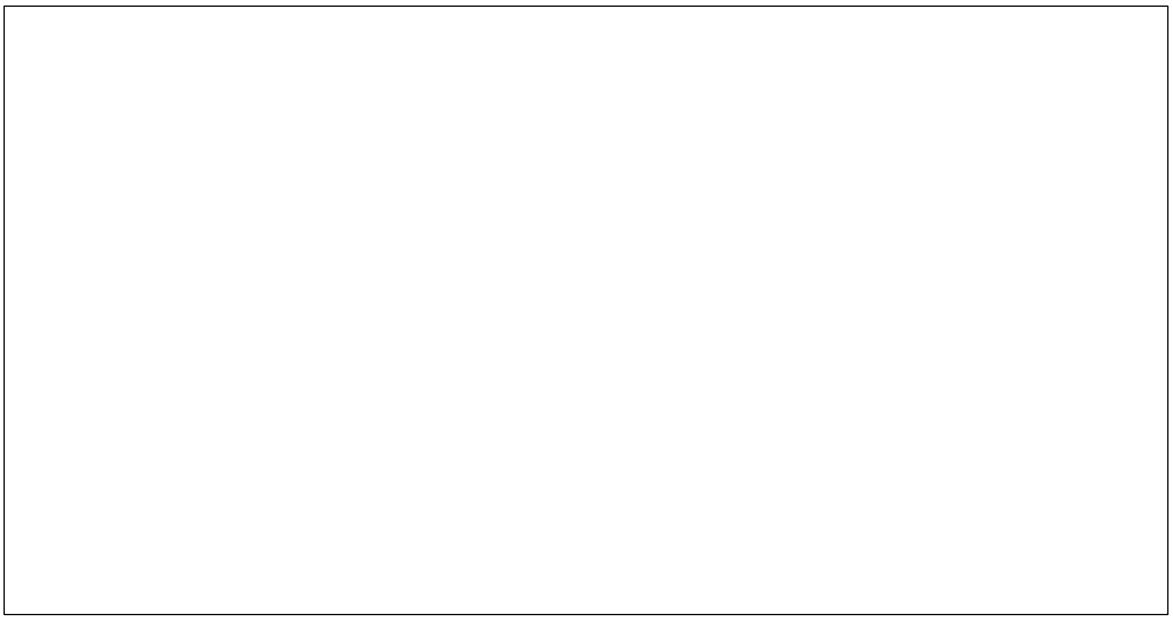
13. Have you created contrast in your design? Elaborate.

_____

_____

**Alternative to steps 9-15**

In the space below, you are to create a new image using all the lines and shapes that you identified. You can use colored pencils to add color to the shapes or varied parts of your design.

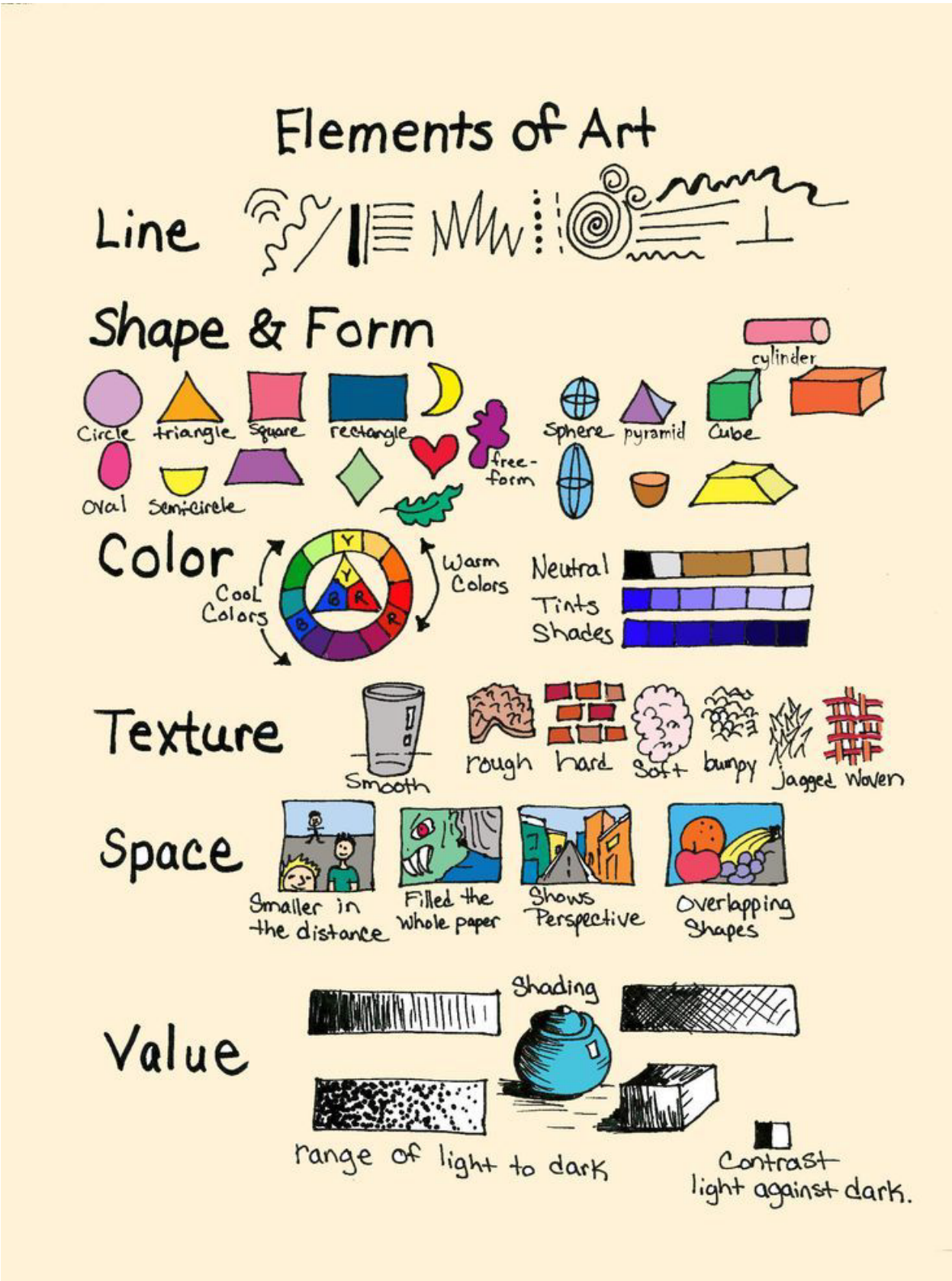


In the space below, write an algorithm which is the sequence of steps you used to create your image. 2 things should be incorrect. (ie, leave out a shape that you drew or add a description of a line in your image that you didn't include). Accuracy in your algorithm will be important, including telling where you placed objects, size, color and any overlapping.

Algorithm:

_____
_____
_____
_____
_____
_____
_____
_____
_____

Share your algorithm with another student and see if they can find the inaccuracies of your algorithm by crossing them out with a colored pencil or adding in the step you missed.



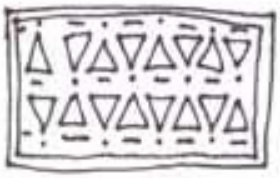

*Retrieved from:* https://bit.ly/3asuLY6

# The ABCs of Art By M.C.Gillis

# Principles of Art

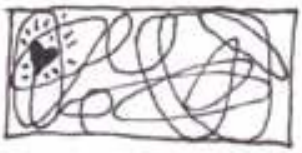
## Pattern

Repetition of the elements of art



## Emphasis

Focus - Main idea
What "grabs" your attention

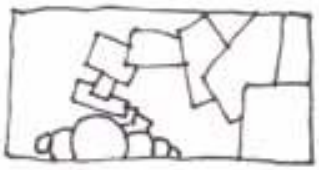


## Variety

An assortment of lines, shapes, colors and other elements of art in the art work

## Unity

How the elements work together, fit together, so the art work looks complete



## Balance

Symmetrical

same design on both sides of a midline.

Asymmetrical

A balance that is not even

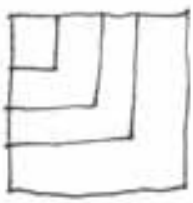
Radial

## Rhythm & Movement

A regular repetition of the elements of art to create a sense of rhythm and/or movement

## Proportion

How parts fit together to make a whole - Size relations
(Includes scale, monumental, miniature, exaggeration...)



# Art Rubric

Name: _____ Date: _____

Assignment: _____

| | Excellent Exemplary 5 | Above Average Very good Acceptable 4 | Average Good 3 | Below Average Barely Acceptable 2 | Unsatisfactory Needs Improvement 1 |
|---|---|---|---|---|---|
| Understanding and Application of Art Concepts | | | | | |
| Work Habit: Use of time Effort | | | | | |
| Craftsmanship Use of Materials Presentation | | | | | |
| Creativity Originality | | | | | |
| Assignment fulfilled/ completed | | | | | |

Comments:_____

_____

_____

_____

Grade (total points x 4): _____

**Computational Thinking Self-Assessment: Kandinsky**

Which approaches did you use? On each double-headed arrow line, mark and X to show how much you used each approach. Justify your response on the two writing lines.

**Tinkering**

**MIN** ⟷ **MAX**

**Creating**

**MIN** ⟷ **MAX**

**Debugging**

**MIN** ⟷ **MAX**

**Persevering**

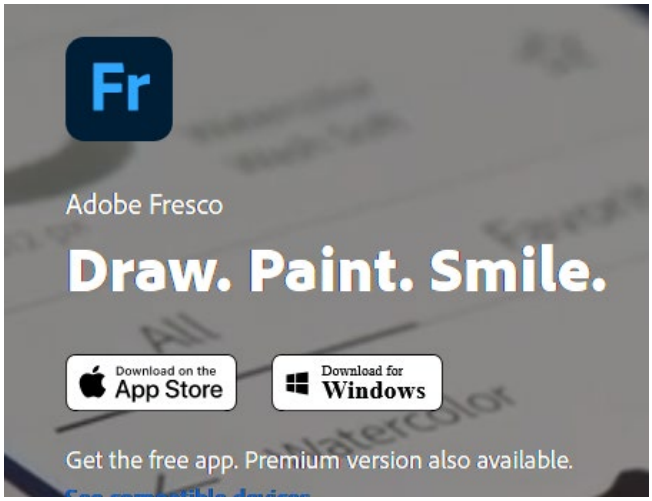
**MIN** ⟷ **MAX**

**Collaborating**

**MIN** ⟷ **MAX**

**CoSpaces Edu Extension**

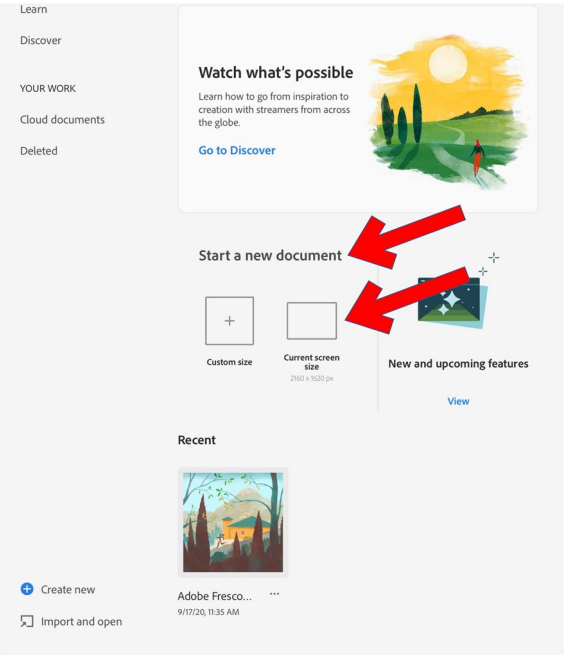
CoSpaces Edu is a cloud-based digital workspace in which you can create augmented reality (AR) and virtual reality (VR). SHOULD THIS BE HERE?




To get started, go to the App Store on your iPad and download *Adobe Fresco* (you will have to create an account—it's free).

Follow the prompts to create an account.

When Fresco is running, you will see a screen similar to the above except that yours will have a black background. Look at the "Start a new document" section and click on "Current screen size."



# CAS V3: Ready, *Set*, Go

**Objective:** Inspired by the online game, *Daily Set Puzzle* (https://www.setgame.com/set/puzzle), students will explore pattern recognition and computer skills as they create their own game puzzle.

**NC Standards:**

- **8.CX.2.2** Analyze skills and information needed from visual arts to solve problems in art and other disciplines
- **8.CX.2.3** Use collaboration to arrive at effective solutions to identified problems
- **8.CX.2.4** Exemplify the use of visual images from media sources and technological products to communicate in artistic contexts

**21st Century Skills:** Creativity and Innovation, Critical Thinking and Problem Solving, Communication and Collaboration, Information Literacy, Media Literacy, ICT Literacy, Productivity and Accountability

**Blooms Taxonomy**: Remember, Understand, Apply, Analyze, Evaluate, Create

| **Primary CT Concepts** |
| --- |
| **Algorithms (Precise sequence of instructions, or set of rules, for performing a task):** Students must comprehend and follow the rules of *Set* to understand how to create their own *Set* game<br><br>**Patterns (Spot patterns to make predictions, create rules, and solve other problems):** Students need to be able to recognize patterns to solve the Set game, and also create and solve their own |

**Lesson Outline**

To begin, students will need to play the online game, Daily Set Puzzle. This can be found on the web: https://www.setgame.com/set/puzzle

They will need to click on the *Learn to Play* tab: https://www.setgame.com/set/puzzle_rules

There they will find tutorials and printable instructions. They can watch a short tutorial or download the written directions.

Upon completing the puzzle, they will work with a partner to draft a sketch of their own puzzle *(worksheet attached below).* Their puzzles should display twelve cards showing three different symbols of their choice (other than ovals diamonds or squiggles) and three different colors of their choice (other than red, green or purple). The puzzles should create at least 3 'sets' following the same rules as the online game. Note: Our observation is that unless students draw their own symbols, the symbols they find online will not appropriately convey the attributes that they intend.

Once students have finished their draft drawings, they will need to create their final game using Google Draw. Games can be printed out and shared amongst students to solve other student's puzzles.

**Example of a set #1:**

**Example of a set #2:**

Name: _____

# Set Game Worksheet

For this project, you will need to play the Set Game on the web https://www.setgame.com/set/puzzle. You will need to read the instructions carefully as you'll need this information in order to create your own game. https://www.setgame.com/set/puzzle_rules

In the space below, using the rules of Set Game, create a display of twelve cards showing objects that you choose, (other than ovals, diamonds or squiggles), and colors that you choose (other than red, green or purple). The resulting cards should create at least 3 'sets'. Examples and directions are on the attached sheet.

Once you've finished, you will recreate your drawings on Google Draw and allow others to find your 'sets'

| | | | |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

Solutions:

| | | |
|---|---|---|
| | | |
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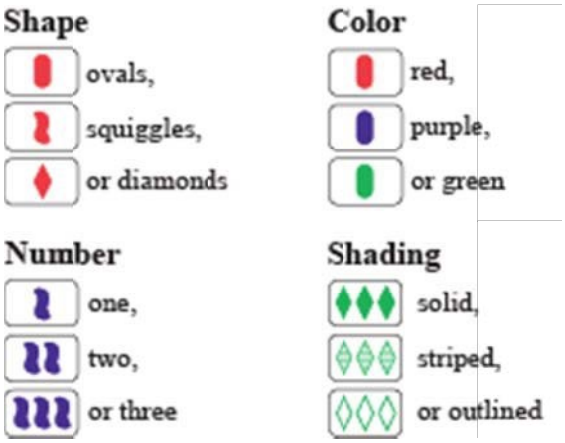
| | | |
| | | |

# THE FAMILY GAME OF VISUAL PERCEPTION®

# INSTRUCTIONS

Ages: 6 to adult
Number of Players: 1 or more

The object of the game is to identify a *SET* of 3 cards from 12 cards placed face up on the table. Each card has four features, which can vary as follows:




A *SET* consists of 3 cards in which each of the cards' features, looked at one-by-one, are the same on each card, or, are different on each card. All of the features must separately satisfy this rule. In other words: shape must be either the same on all 3 cards, or different on each of the 3 cards; color must be either the same on all 3 cards, or different on each of the 3, etc. See EXAMPLES below.

**A QUICK CHECK - Is it a SET?**

If 2 cards are the same and 1 card is different in any feature, then it is not a *SET*. For example, if 2 are red and 1 is purple then it is not a *SET*. A *SET* must be either all the same OR all different in each individual feature.

**EASY START**

For a quick introduction, start with the small deck (just the solid symbols). This eliminates one feature, shading. Once you can quickly see a *SET* when playing the 3 feature version, shuffle the 2 decks together to play the full game.

**THE PLAY**

The dealer shuffles the cards and lays 12 face up on the table (in a rectangle) so that they can be seen by all. Players remove *SET*s of 3 cards from anywhere on the table. Each *SET* is checked by the other players. If correct,

the *SET* is kept by the player for one point and the dealer replaces the 3 cards with 3 from the deck. A player must call *SET* before picking up the cards. There are no turns, the first player to call *SET* gets control of the board. After he/she has called *SET*, no other player can pick up cards until that player has finished. The *SET* must be picked up within a few seconds after calling it. If a player calls SET and does not have one, or if the *SET* is incorrect, he/she loses one point, and the 3 cards are returned to the table. If all players agree that there is not a SET in the 12 cards, 3 more cards are laid face up on the table. The 3 cards are not replaced when the next SET is found, reducing the number back to 12. Note: There are ~ 33:1 odds that a *SET* is present in 12 cards, and ~ 2500:1 odds when 15 cards are on the table.

The play continues until the deck is depleted. At the end of the game there may be cards remaining that do not form a *SET*. The number of *SET*s held by each player is then counted. One point is given for each *SET*. High score wins.

If you want a longer game, the deal passes to the person on the dealer's left, and the play resumes with the deck being reshuffled. When all the players have dealt, the game ends. The player with the highest overall score wins.

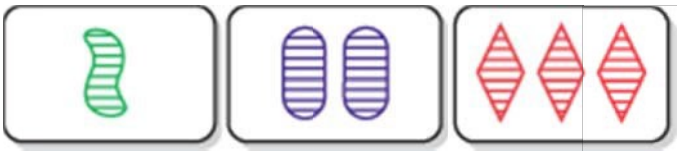
When playing solitaire, if the player does not find a *SET*, 3 more cards are laid down with a penalty of one *SET*.

To win the game, the player must remove this penalty by finding a SET on the table out of the last 12 cards.

**EXAMPLES**

For example, the following are SETs:

All three cards have the same shape, the same color, the same number of symbols and they all have different shading.



All three cards have different shapes, different colors, and different numbers of symbols and they all have the same shading.

All three cards have different shapes, different colors, different numbers of symbols and different shadings.

# Art Rubric

Name: _____ Date: _____

Assignment: _____

| | Excellent Exemplary 5 | Above Average Very good Acceptable 4 | Average Good 3 | Below Average Barely Acceptable 2 | Unsatisfactory Needs Improvement 1 |
|---|---|---|---|---|---|
| Understanding and Application of Art Concepts | | | | | |
| Work Habit: Use of time Effort | | | | | |
| Craftsmanship Use of Materials Presentation | | | | | |
| Creativity Originality | | | | | |
| Assignment fulfilled/ completed | | | | | |

Comments:_____

_____

_____

_____

Grade (total points x 4): _____

**Computational Thinking Self-Assessment: Ready, Set, Go**

Which approaches did you use? On each double-headed arrow line, mark and X to show how much you used each approach. Justify your response on the two writing lines.

**Tinkering**

**MIN** ⟷ **MAX**

**Creating**

**MIN** ⟷ **MAX**

**Debugging**

**MIN** ⟷ **MAX**

**Persevering**

**MIN** ⟷ **MAX**

**Collaborating**

**MIN** ⟷ **MAX**

# CAS V4: Symbolic Portraits

**Objective:** For this project, students will create a self-portrait layered with symbolic imagery

**NC Standards:**

- **8.V.2.1** Create art that uses the best solutions to identified problems
- **8.V.2.2** Apply observation skills and person experiences to create original art
- **8.V.2.3** Create original art that conveys one or more ideas or feelings
- **8.V.3.2** Use a variety of media to create art
- **8. CR.1.2** Critique personal art based on identified criteria

**21st Century Skills:**

Creativity and Innovation, Critical Thinking and Problem Solving, Collaboration, Media Literacy, ICT Literacy, Initiative and Self Direction, Productivity and Accountability

**Blooms Taxonomy:**

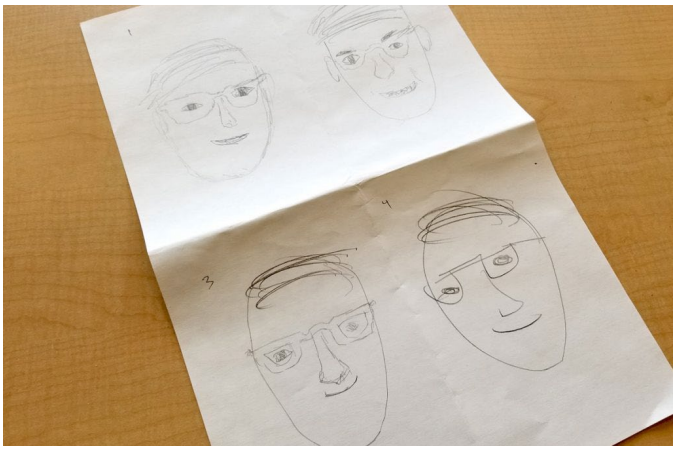
Create, Evaluate, Analyze, Understand

| Primary CT Concepts |
| --- |
| **Algorithms (Precise sequence of instructions, set of rules, for performing a task):**<br>Students are asked to follow a specific set of steps to create their symbolic portrait; if certain steps are not followed in the correct order, students will not reach the desired outcome |

## Lesson Outline

**Preliminary Exercises: (2-3, 40 minute class periods)**

1. Have each student take a piece of paper and fold it into four quadrants. Students should be sitting across from each other and able to see the other person's face and torso.
2. Inform them they will be doing portraits and you are timing them. Wait for the usual groans and shrieks about their appearance to subside, and then start your timer.
3. For the first drawing, give students two minutes. From there, give progressively shorter times: one minute, thirty seconds, ten seconds.
4. Once all drawings are done, encourage them to take a look at each portrait and notice how their drawings changed as things sped up.

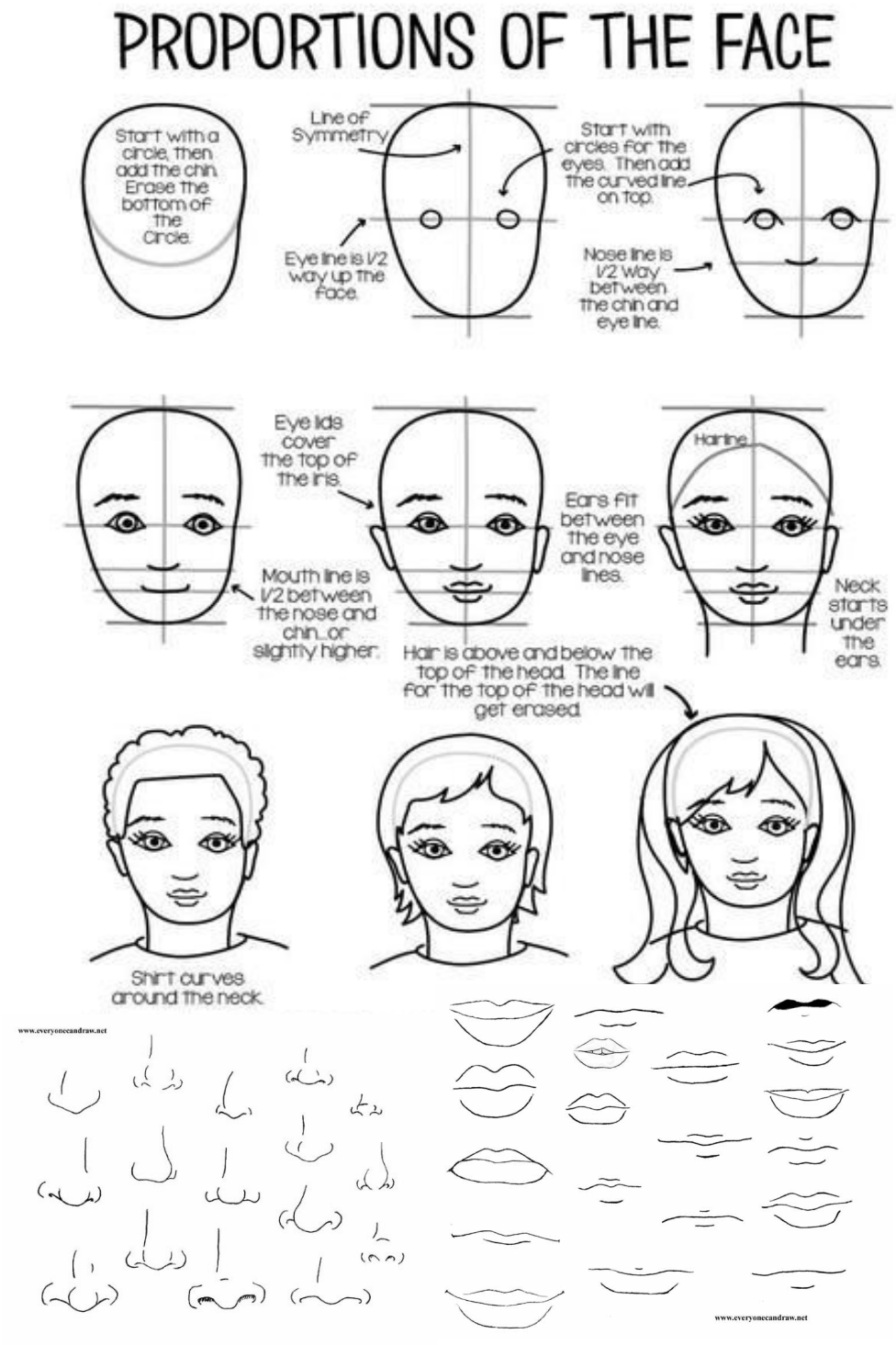


*Retrieved from:*
*https://bit.ly/2FpqoBL*

This exercise is a great way to get the students engaged in drawing, and eliminate concerns about the way portrait looks. You could follow through with questions such as, *"What did you find challenging? Were you able to capture any semblance of the person you were drawing? If so, what features did you focus on?"*

Next, do a guided portrait with the students. Students can work on a piece of 9x12 paper with pencils. There are several guides on how to teach this, such as the one below.

Remind students that these are all preliminary exercises to be handed in with their final projects and that it helps in the grading process to assess their efforts, but these are not the final product.



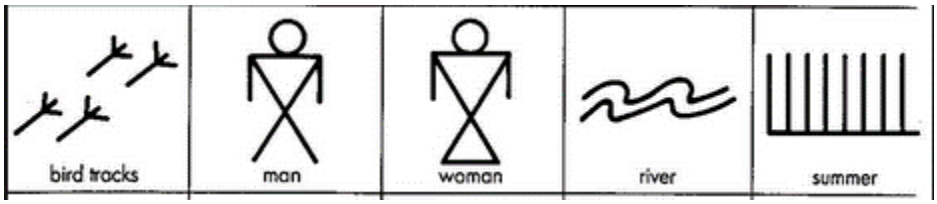

*Retrieved from*: https://bit.ly/33ZeAAB

**Symbol Exercises**

Following these preliminary exercises, begin a discussion on symbols; defining them as well as noting examples of symbols they are familiar with, (hearts, clovers, peace signs, the yin and yang symbol etc.). Ask them to think about the countless emojis on their phones that they encounter. Next, you can ask students to do a group activity to simplify ideas into symbolic imagery. *(1 class period)*

For example, students work in groups of 3-5 students. You can write words or phrases on the board and instruct students to come up with a symbolic image to represent the various words/phrases. They can choose one person to draw, or they can all draw and then combine their efforts for display. You can give students 3-5 minutes per word. Some examples of words/phrases are 'hard work', 'relaxation', 'joy', or 'school'. They need to write the word they were trying to convey on the back of their drawings. After you have done all the words, all visuals are displayed and then the class is asked as a whole to tell what they think is conveyed in the various drawings.

The point of this exercise is to get them thinking in terms of simplifying their own symbolic imagery. Stress the fact a lot of symbols are simple, void of extraneous detail in order to convey their message. If necessary, show more examples from the internet, such as Native American symbols.




*Retrieved from: https://bit.ly/2DWOoM7*

**Symbolic Portrait Lesson (5, 40-minute class periods)**

Students are now ready to start creating their own symbolic language. Give them the worksheet to fill out titled *A Few Things About You (provided below).*

Instruct students to take the information that they wrote and pick 4-5 prominent items that define them. From here they have to draw a symbolic image that would convey their interests.

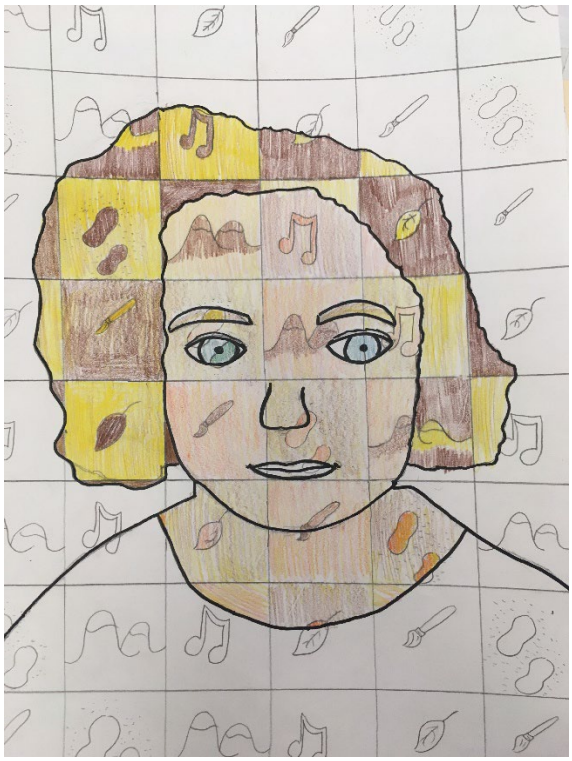
Next, give them 12x18 drawing paper. They will create a 2" grid on this paper. Then they are to draw their symbols onto the boxes in this grid. They are to repeat their symbols in any order that they prefer. Encourage them to draw their symbols as large as possible in the given spaces.

While they are drawing, print out the headshot of each student. Outline a 6x9 area and then draw a 1” grid directly on their photo.

Next, they will be translating and drawing their portraits on the 12x18 paper. This can be challenging for some to draw an image on top of another image. Tell them not to erase or draw around the symbols. Once the portrait is finished, they are to go over the lines of the portrait with a black sharpie marker to emphasize the portrait. For now they can leave the symbols in pencil.

Students then are instructed to pick 4 color schemes that they will use in their images for each of the following areas, (the hair, the face and neck, their clothes and the background). Color schemes could include but are not limited to:  monochromatic (one color with black and white), primary or secondary colors complementary colors, analogous colors.

Then, instruct students to color their portraits using the varied color schemes in the different parts to emphasize not only the symbols, but the face as well. Examples of finished portraits could be displayed to help them understand what the finished image might look like. Below are portraits in progress.

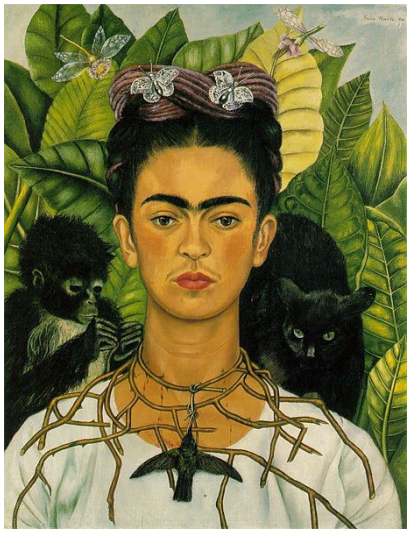


If time allows, you can show the students the work of other artists using symbolism in their work. For example, you can look at Audrey Flack's *Wheel of Fortune (Vanitas)* Painting and discuss what the possible objects could mean.

*Wheel of Fortune, Audrey Flack,*

*Retrieved from: https://bit.ly/3q1Uk3F*

Frida Kahlo is another artist, whose self-portraits are loaded with personal symbols. Ask students what this imagery tells us about the artist.



*Self-Portrait with Thorn Necklace and Hummingbird, 1940, Frida Kahlo*

*Retrieved from: https://bit.ly/2Y4xrqe*

And finally the portrait by Andy Warhol can generate a lot of interesting conversation about what the artist is trying to convey in his interpretation of himself.

*Self-Portrait, 1986, Andy Warhol*

*Retrieved from: https://bit.ly/2FtMBPh*

**Analysis and Assessment**

In the end, students can fill out a rubric *(attached below)* and turn it in with all their preliminary work. They can also fill out the Symbolic Self Portrait Computational Thinking Assessments. This could include asking them to elaborate on how they used the various CT approaches.

## Materials

9x12 drawing paper or copy paper, 12x18 drawing paper, pencils, colored pencils, rulers, sharpies, computer access and copier.

## References


https://theartofeducation.edu/2016/10/19/introduce-symbolism-form-game/

http://salemhydeartroom.blogspot.com/2014/11/6th-grade-symbolic-self-portraits.html

# A few things about you...

What is your first and last name? _____

Do you prefer a nickname? If so, what is it? _____

What is your favorite food? _____

What is your favorite sport? _____

What do you like to do in your free time?

_____

What are you most afraid of? _____

What is your favorite television show? _____

Name a book you enjoyed reading? _____

Name a musical artist or group that you like? _____

Name a song that you like: _____

What is your favorite animal? _____

What was a favorite place you have visited? _____

Where is a place you would like to visit? _____

What is your favorite season? _____

What is your favorite color? _____

Do you prefer to be indoors or outdoors?_____

Do you like shapes that are organic (from the natural world) or geometric (manmade ie circles, squares and triangles)? _____

Finish the following sentences.

Someday I want to be _____

If I could make the world a better place I would _____

# Art Rubric

Name: _____ Date: _____

Assignment: _____

| | Excellent Exemplary 5 | Above Average Very good Acceptable 4 | Average Good 3 | Below Average Barely Acceptable 2 | Unsatisfactory Needs Improvement 1 |
|---|---|---|---|---|---|
| Understanding and Application of Art Concepts | | | | | |
| Work Habit: Use of time Effort | | | | | |
| Craftsmanship Use of Materials Presentation | | | | | |
| Creativity Originality | | | | | |
| Assignment fulfilled/ completed | | | | | |

Comments:_____

_____

_____

_____

Grade (total points x 4): _____

**Computational Thinking Self-Assessment: Symbolic Portrait**

Which approaches did you use? On each double-headed arrow line, mark and X to show how much you used each approach. Justify your response on the two writing lines.

**Tinkering**

**MIN** ⟷ **MAX**

**Creating**

**MIN** ⟷ **MAX**

**Debugging**

**MIN** ⟷ **MAX**

**Persevering**

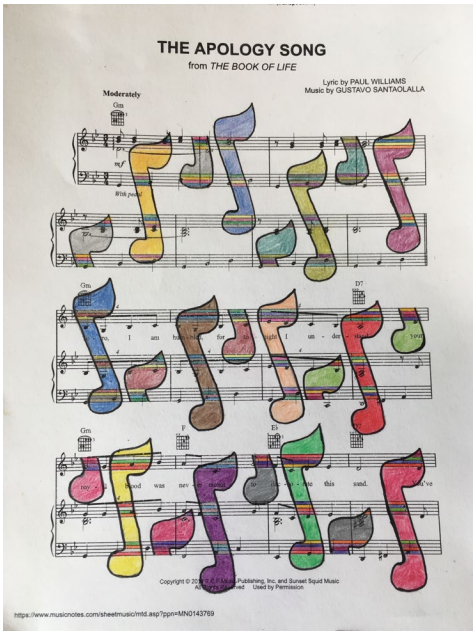
**MIN** ⟷ **MAX**

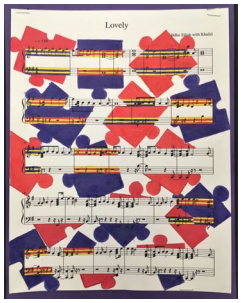
**Collaborating**

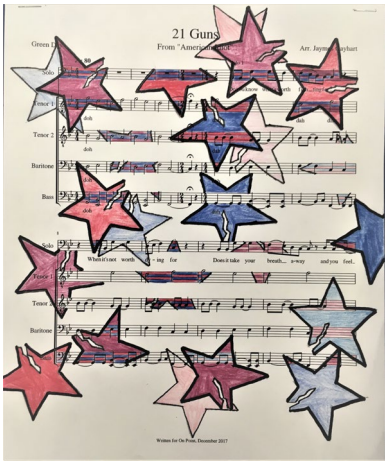
**MIN** ⟷ **MAX**

# CAS V5: Layers of Meaning: Palimpsests

**Objective**: For this project, students will learn about palimpsests and then, using the idea of layering, they will use a musical score as a canvas by embedding symbols into the score using color and line.



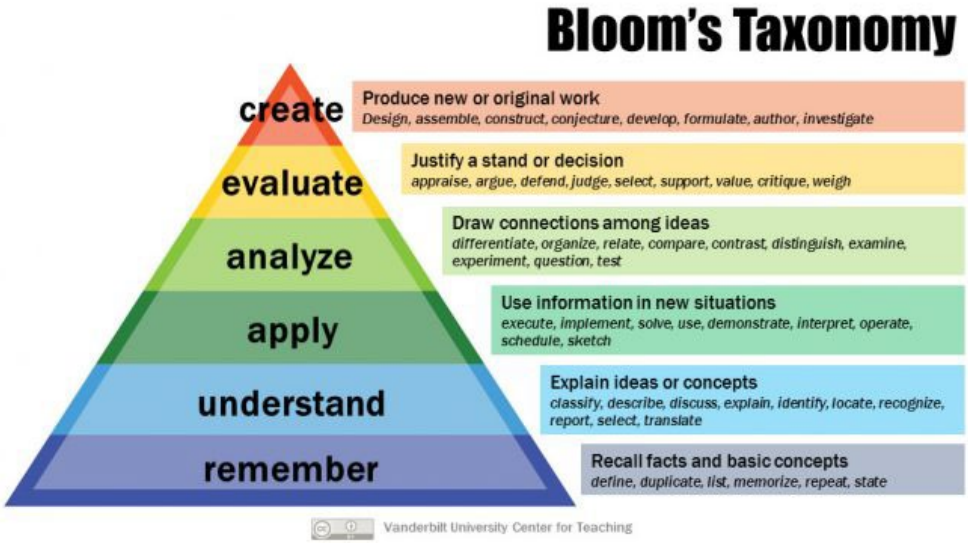




**NC Standards**:

- ***8.V.1*** Use the language of visual arts to communicate effectively
- ***8.V.2*** Apply creative and critical thinking skills to artistic expression.
- ***8.V.3*** Create art using a variety of tools, media, and processes, safely and appropriately
- ***8.CR.1*** Use critical analysis to generate responses to a variety of prompts.

**21st Century Skills**: Creativity and Innovation, Critical Thinking and Problem Solving, Communication and Collaboration, Information Literacy, Media Literacy ICT Literacy

**Bloom's Taxonomy**: Create, Evaluate, Analyze, Apply, Understand




*Retrieved from:* [https://bit.ly/344rUnc](https://bit.ly/344rUnc)

**Primary CT Concepts**

**Algorithms (A precise sequence of instructions, set of rules, for performing a task):**
To create a layered music score based on the required criteria

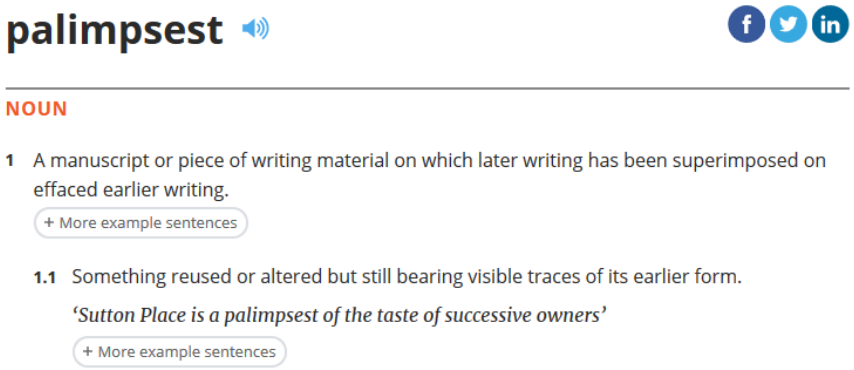
**Logic (Helps us to establish and check facts, and make predictions):**
To follow the logic of design to ensure balance, variety, and unity

**Patterns (By spotting patterns we can make predictions, create rules, and solve problems):**
To illustrate patterns in the shapes and colors of the design

**Evaluation (We use evaluation to make judgments based on different factors, such as design criteria)**:
To evaluate the outcome of the design process for artistic expression

## Lesson Outline

The following preliminary activities can be done over two or three 40-minute class periods.



**palimpsest**

NOUN

1 A manuscript or piece of writing material on which later writing has been superimposed on effaced earlier writing.

+ More example sentences

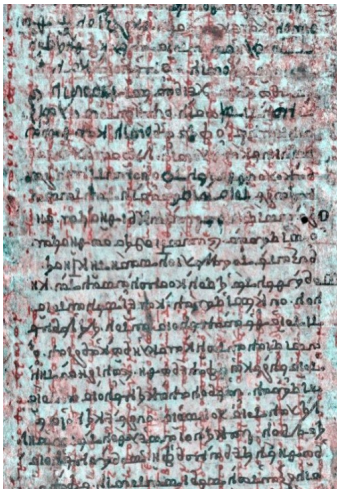
1.1 Something reused or altered but still bearing visible traces of its earlier form.

*'Sutton Place is a palimpsest of the taste of successive owners'*

+ More example sentences

*Oxford definition of 'palimpsest'*
*Retrieved from: https://bit.ly/3aqI5wa*

First, invite students to research *Palimpsests*. Tell students to find an image of a palimpsest that they like and store it on their Chrome book or iPad to reference later in the lesson.



*Example of palimpsest*
*Retrieved from: https://bit.ly/3iKgadH*

Second, introduce a number of activities to build creative and critical thinking. Suggestions for activities can be found and adapted from Cindy Ingram's *Art Class Curator* website. (https://artclasscurator.com/)

For example, students can look at several works of art and answer the question: *"If these images were a song, what would it sound like?"* Images include *The Old Guitarist* by Pablo Picasso, *Fighting Forms* by Franz Marc, and *Composition VI* by Wassily Kandinsky.

*Fighting Forms, Franz Marc*
*Retrieved from:*
*https://bit.ly/3h2DRqN*

*The Old Guitarist, Pablo Picasso*
*Retrieved from: https://bit.ly/3iGJa60*

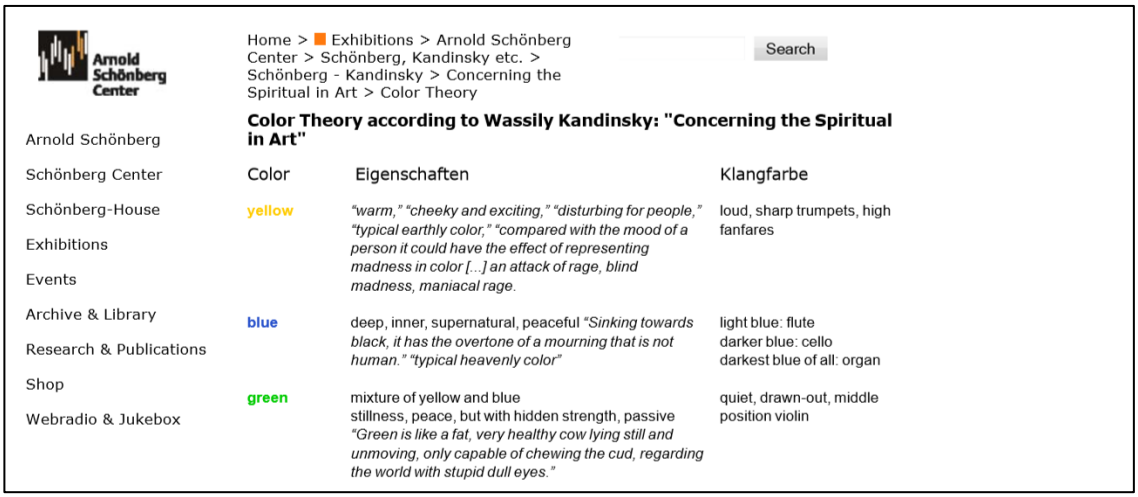
*Composition VI, Wassily Kandinsky*
*Retrieved from: https://bit.ly/33Ze3yx*

Students then partner with another student and are given a color. They have to think about what kind of sound might be associated with that color as well as the type of instrument that might be used to make that sound.

This is followed by a discussion of Kandinsky's theories on colors and the kinds of sounds he associated with color. An explanation of the sounds that Kandinsky associated with certain colors can be found in this PDF:

https://www.mat.ucsb.edu/~g.legrady/academic/courses/12w259/Kandinsky_%20Color%20Theory.pdf

(Example follows)



Arnold Schönberg Center

Home > Exhibitions > Arnold Schönberg Center > Schönberg, Kandinsky etc. > Schönberg - Kandinsky > Concerning the Spiritual in Art > Color Theory

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**Color Theory according to Wassily Kandinsky: "Concerning the Spiritual in Art"**

| Color | Eigenschaften | Klangfarbe |
|---|---|---|
| yellow | *"warm," "cheeky and exciting," "disturbing for people," "typical earthly color," "compared with the mood of a person it could have the effect of representing madness in color [...] an attack of rage, blind madness, maniacal rage.* | loud, sharp trumpets, high fanfares |
| blue | deep, inner, supernatural, peaceful *"Sinking towards black, it has the overtone of a mourning that is not human." "typical heavenly color"* | light blue: flute<br>darker blue: cello<br>darkest blue of all: organ |
| green | mixture of yellow and blue<br>stillness, peace, but with hidden strength, passive<br>*"Green is like a fat, very healthy cow lying still and unmoving, only capable of chewing the cud, regarding the world with stupid dull eyes."* | quiet, drawn-out, middle position violin |

*Farbstudie Quadrate, Wassily Kandinsky*
*Retrieved from: https://bit.ly/2Y5fYOf*

Next, have students listen to music of Mussorgsky:
https://www.youtube.com/watch?v=LQ255WfG_lw

Tell the students to draw a picture inspired by Mussorgsky's composition.

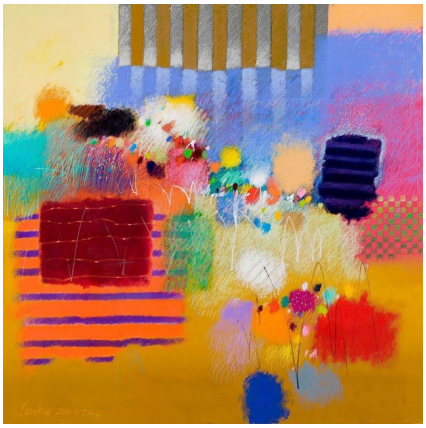
Then show the students the costume designer's sketch (Viktor Hartmann: A costume sketch of canary chicks*)* for the ballet *Trilby* by J. Gerber, which was inspired by Mussorgsky's composition.

*Ballet of the Chicks in their Shells, Viktor Hartmann*
*Retrieved from: https://bit.ly/2PV4OXR*

**Drawing with oil pastels**
Students now get to explore *mark making* with oil pastels followed by a guided lesson in which they will be drawing to music.

***Learn about mark making here***:
https://www.liveabout.com/how-does-mark-making-affect-your-paintings-2577630

On scrap paper using one oil pastel, students explore and create value scales, tints, shades and sgraffito. Adding another color, they can blend the two colors together and layer the color. Next, students are introduced to the artist Moe Booker and complete the art lesson outlined on Don Masse's blog, creating their own music inspired drawings.
http://www.shinebritezamorano.com/search?q=art+with+moe

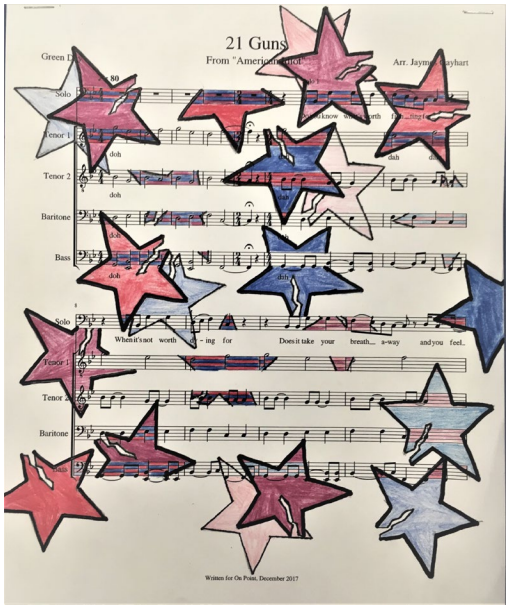


*Careless Exactatude, Moe Booker*
*Retrieved from: https://bit.ly/3472qWf*

## Redesigning a Music Score

**Overall Concept**

At this stage, students will begin to redesigning a musical score by embedding a symbol in it while taking into account design principles.




*Musical score by student*

**Principles of Organization**

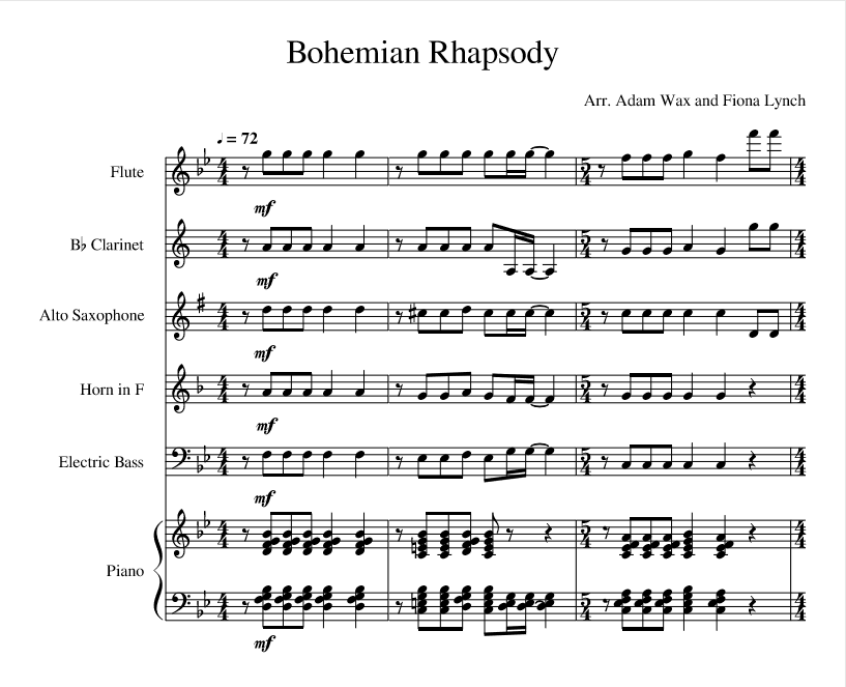
Before embarking on their designs, students can review the principles of organization by doing a critical analysis of one of Kandinsky's composition paintings.

*Yellow, Red, and Blue, 1925, Wassily Kandinsky*
*Retrieved from: https://bit.ly/30ZXd0p*

***A review of the elements of the principles of art can be found here:***
http://www.robertspahr.com/teaching/nmp/elements_principles_art.pdf

**Select Music Score**

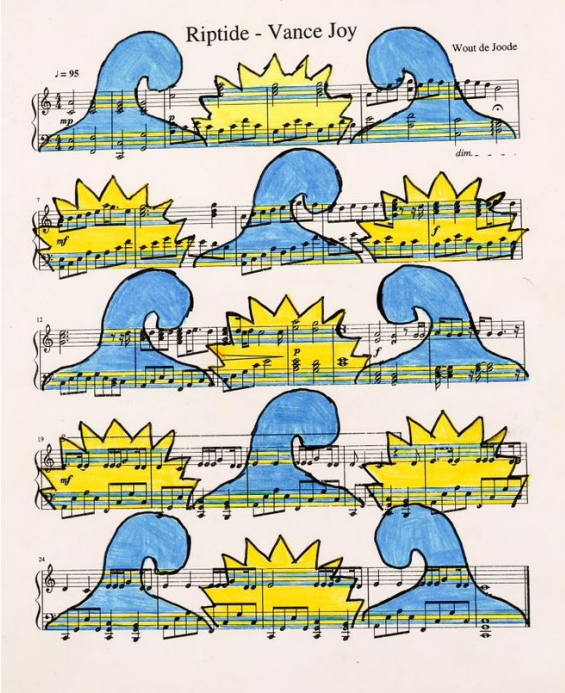
Next, students choose a music score of one of their favorite songs. Students can find their song on MuseScore (musescore.org) and send it to you so that it can be printed on cardstock.




*Example of score from MuseScore*

**Choosing Symbols**

They should read the lyrics to the song and then on a worksheet *(provided below)* draw three symbols that would best relate to the song. Once they decide on **<u>one or two</u>** symbols, they can create a stencil of it using a Cricut machine. If they don't have access to a Cricut, they can cut their stencil out of cardstock or stencil paper.




*Student used wave and sun to convey lyrics of Riptide*

**Integrating the Symbols with the Music Score**

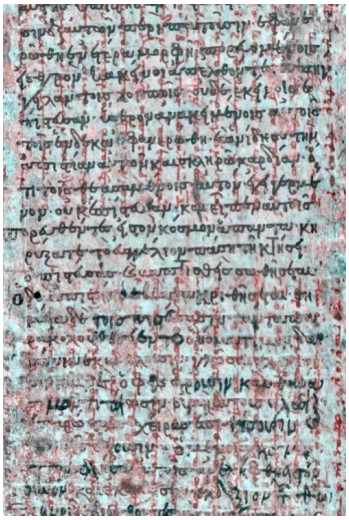
Before creating their final draft, students are to work out a design on the music score that is printed on <u>regular copy paper</u>, by repeating the design 10-15 times. They should also work out their ideas for color on this draft copy paper image.

Remind the students to think back over the discussion on music and color as it may help them in choosing colors that they would associate with the music and lyrics. They can work with colored pencils, and Sharpie markers or felt tip pens for outlining. If time allows, it can be helpful to do a group critique or have them partner with someone to discuss what is working in their designs and any helpful suggestions in developing their final draft image.

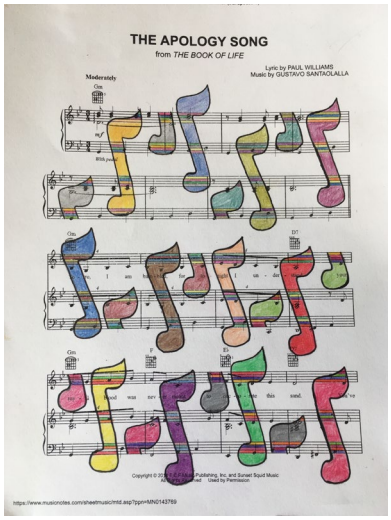
When you feel it's appropriate, provide the students with the cardstock version and tell them to go ahead and finalize their work.

**Reflection**

When drawings are complete, they are to go back to the palimpsest image that they chose at the beginning of this unit. They should complete a Venn diagram (double bubble) comparing and contrasting their music score with the palimpsest image.

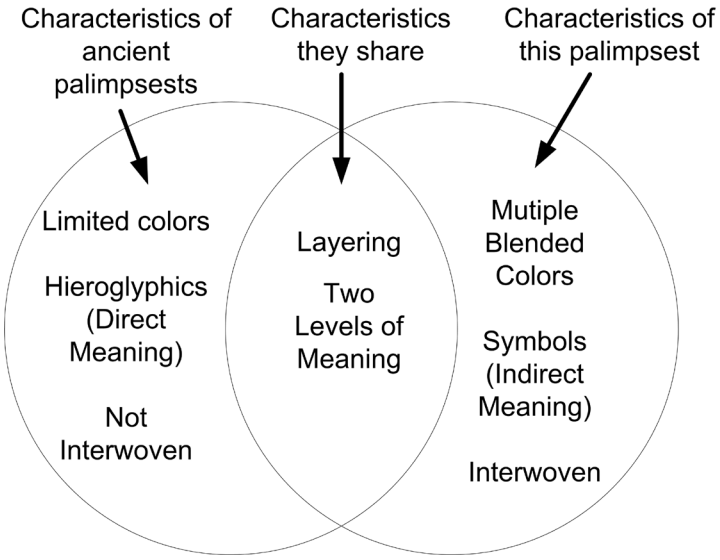


*Retrieved from: https://bit.ly/30ZPJe4*




*Students compare/contrast palimpsest image found in the beginning to their own palimpsest design*

For example:




**Self-Assessment**

Before turning in their work, students can fill out a ***self-assessment*** *(provided below)* assessing the extent to which they utilized each approach to computational thinking. Students can also fill out a ***rubric*** *(provided below)* to grade themselves on their ability to complete the palimpsest assignment focusing on their effort, creativity, and ability to follow directions.

## Vocabulary

Palimpsest, Music Score, drawing, symbols, patterns, design, color scheme, layering

## Materials

Cricut machine (or other means of creating stencils), Cardstock paper for printing the music scores and cutting stencils out of, pencils, felt tip pens, fine tip sharpie markers, colored pencils, computer and printer

## References


Cindy Ingram - *Art Class Curator*
https://artclasscurator.com/

Bloom's Taxonomy Information
https://cft.vanderbilt.edu/guides-sub-pages/blooms-taxonomy/

Elements of Principles of Art
http://www.robertspahr.com/teaching/nmp/elements_principles_art.pdf

Kandinsky Color Theory
https://www.mat.ucsb.edu/~g.legrady/academic/courses/12w259/Kandinsky_%20Color%20Theory.pdf

Mark Making – Moe Booker
http://www.shinebritezamorano.com/search?q=art+with+moe

Mark Making Explanation
https://www.liveabout.com/how-does-mark-making-affect-your-paintings-2577630

MuseScore
www.musescore.org

Mussorgsky Music & Art
https://www.youtube.com/watch?v=LQ255WfG_lw

Name: _____

***Palimpsest Worksheet***

Using your Chromebook, look up palimpsest and write a definition below:

_____

_____

_____

How did palimpsests come about?

_____

_____

_____

Find 1-2 examples of palimpsests that you like. Save the image in your Chrome Books. We will print these out later.

Name: _____

***Palimpsest Worksheet***

If this painting by Pablo Picasso, titled *The Old Guitarist*, was a song, what would it sound like?

_____

If the painting by Franz Marc titled *Fighting Forms,* was a song, what would it sound like?

_____

If the painting by Wassily Kandinsky titled *Composition VI,* was a song, what would it sound like?

_____

Partner share…

Look at the color you've been given. Think about what sounds your color might make.

What instruments go best with your color? _____

Is your color FAST or SLOW? _____

Is your color LOUD or SOFT? _____

Listen to the music of Moussorgsky. Imagine a painting that was painted to this song. What would it look like? Then draw the image in the space below.

_____

Name: _____

***Palimpsest Worksheet***

Choose a musical score to one of your favorite songs.

Find the musical score on the MuseScore website.

You can send either the title of the song or the MuseScore to my email and I will print it out.

Read the lyrics.

Draw three symbols that would best relate to the song. Keep the image simple. Try to invent your own symbol and not use pre-existing symbols.

Title of your song: _____

Symbols:

# Art Rubric

Name: _____ Date: _____

Assignment: _____

| | Excellent Exemplary 5 | Above Average Very good Acceptable 4 | Average Good 3 | Below Average Barely Acceptable 2 | Unsatisfactory Needs Improvement 1 |
|---|---|---|---|---|---|
| Understanding and Application of Art Concepts | | | | | |
| Work Habit: Use of time Effort | | | | | |
| Craftsmanship Use of Materials Presentation | | | | | |
| Creativity Originality | | | | | |
| Assignment fulfilled/ completed | | | | | |

Comments:_____

_____

_____

_____

Grade (total points x 4): _____

**Computational Thinking Self-Assessment: Palimpsest**

Which approaches did you use? On each double-headed arrow line, mark and X to show how much you used each approach. Justify your response on the two writing lines.

**Tinkering**

**MIN** ⟷ **MAX**

**Creating**

**MIN** ⟷ **MAX**

**Debugging**

**MIN** ⟷ **MAX**

**Persevering**

**MIN** ⟷ **MAX**

**Collaborating**

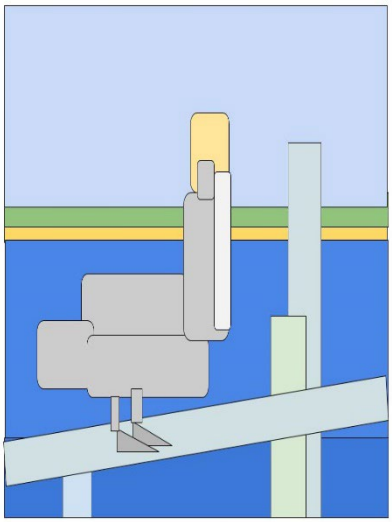
**MIN** ⟷ **MAX**

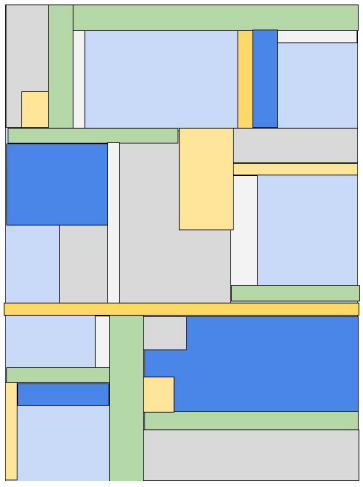
# CAS V6: Digital Mondrian

**Objective:** For this lesson, students will transform an image from Realism to Abstraction using computer-based programs

**NC Standards:**

- **8.V.1.2** Apply the Elements of Art and Principles of Design in the planning and creation of personal art
- **8.V.2.1** Create art that uses the best solutions to identified problems
- **8.V.3.2** Use a variety of media to create art.
- **8.CX.1.2** Analyze art from various historical periods in terms of style, subject matter, and movements
- **8.CX.2.4** Exemplify the use of visual images from media sources and technological products to communicate in artistic contexts
- **8. CR.1.2** Critique personal art based on identified criteria





**21st Century Skills:**

Creativity and Innovation, critical Thinking and Problem Solving, Media Literacy, ICT Literacy, Flexibility and Adaptability, Initiative and Self Direction, Productivity and Accountability

**Blooms Taxonomy:**

Create, Evaluate, Analyze, Apply, Understand

**Primary CT Concepts**

**Abstraction (Identifying what is important and leaving out detail we do not need):** Students are asked to take an ordinary picture and use abstraction to deduce the picture to a Mondrian-style piece of artwork

**Decomposition (Breaking a problem or system down into its parts):** Students must break their original photographs down into parts to fully grasp the process of abstraction

## Lesson Outline

Begin this lesson by having students compare and contrast 2 versions of a flamingo. Do not give them any information or tell them what they will be learning to see if they can come up with the terminology and concepts on their own.

*Alexander Calder's Flamingo,*
*Retrieved from: https://bit.ly/3h028UX*

*James Audubon's Flamingo,*
*Retrieved from: https://bit.ly/3h08y6d*

Once they've finished comparing and contrasting, let them know who the artists are and when they created the works, as well as other pertinent background information. Tell them that some artists choose to be straightforward (James Audubon's Flamingo) in their rendering of their subjects, while others (Alexander Calder's Flamingo) choose to give us the essence of an image.

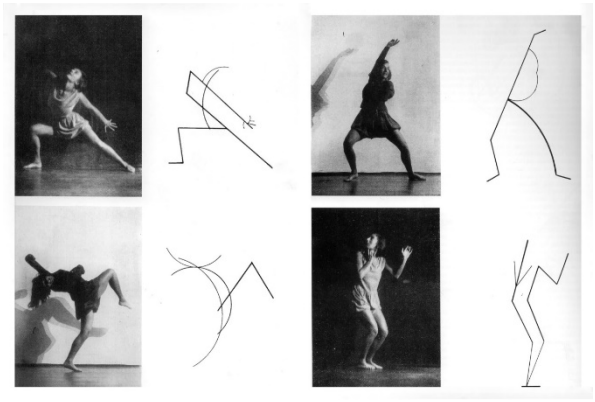
**Explaining Abstraction**

You can explain the process of abstracting an image with a slide of Piet Mondrian's tree series, in which he investigated an image of a tree and extracted the essence of the tree to the point that it merely became shapes and colors.

*Retrieved from: https://bit.ly/341TSjn*

The next image consists of 4 figures in "action" poses. Students are given a blank sheet of copy paper and instructed to fold it into 4 rectangles and then recreate the figures with just lines (not shape). The resulting images should express the essence of the figures action. The lines can vary from straight to curvilinear and they shouldn't use more than 10 lines per figure.

*Example:*



*Dance Curves, Wassily Kandinsky*
*Retrieved from: https://bit.ly/2E9rxN3*

**Abstraction Exercise**

Next, students are given a 2nd sheet of paper and instructed to fold it into 4 quadrants. In the first section they are asked to draw the following image (the bull) as realistically as possible.

*Fold paper like this:*

| | |
|---|---|
| *Draw realistically* | *Only use shapes* |
| *Linear version* | *Between shapes and linear* |

*Bull to draw:*

*Retrieved from: https://bit.ly/2FthCmo*

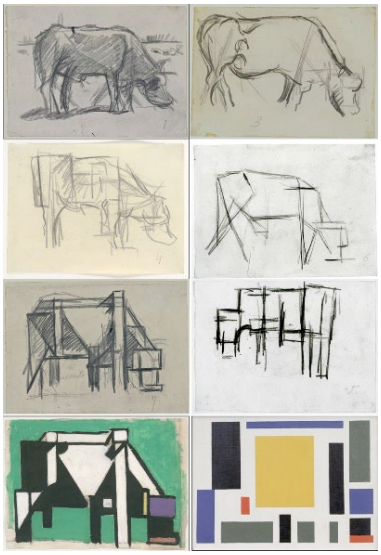
In the 2nd section, they are to simplify the bull and recreate it by only drawing shapes (no details).

In the 3th box, they are to draw a linear version of the bull, making it as simple as possible.

And finally in the 4th box they are instructed to go back and create a version of the bull that has less information than the shape drawing, but more information than the lines, so possibly a combination of the two.

Discuss their work with the students, particularly challenges they encountered in trying to draw an image with just lines and shapes and yet still capture its essence.

You can them the following abstraction of a bull by Theo Van Doesburg to show one artists interpretation of a bull from realism to abstraction:



*Retrieved from: https://bit.ly/2YlcVSn*

A note of caution: Many students may not take these exercises seriously or will try to rush them in order to move onto a final project. However, it is important to build their understanding of abstraction gradually, as it develops their critical thinking and understanding of the concept.

## Digital Mondrian

Students are now instructed to find an image of their choosing either from photographs they've taken or from the web.

They are instructed to write a critical analysis of the photograph *(outlined below)* in order to better understand what they need to extract from the image to capture its essence in their final piece.

It is important to note here that if the students are lacking in any prior knowledge regarding the elements of art or principles of design, a review of these concepts is necessary and essential to their final designs.

Name: _____

**Critical Analysis of Your Photograph**

Once you've found an image for the abstraction process, you'll need to analyze the image to help you better understand what you'll need to emphasize as you abstract the image. Please answer the following questions as thoroughly as possible.

Are there any lines in the image? Are they curvilinear or more geometric?

_____

_____

What kinds of shapes are evident? Are they organic or geometric?

_____

_____

What colors are predominant in the image? Describe the colors in terms of value?

_____

_____

What kinds of textures do you see?

_____

_____

How is the image balanced? Symmetrically, asymmetrically, or radially?

_____

_____

Does your eye go to any one part of the image first? Describe.

_____

_____

How does your eye move throughout the piece? Note the things that you notice as you move throughout the image.

_____

_____

Is anything repeated in the image?

_____

_____

Is there evidence of contrast in the image?

_____

_____

Once you've analyzed your image, you may want to crop the image or even change to a different image before proceeding with the abstraction.

**Decomposition and Abstraction**

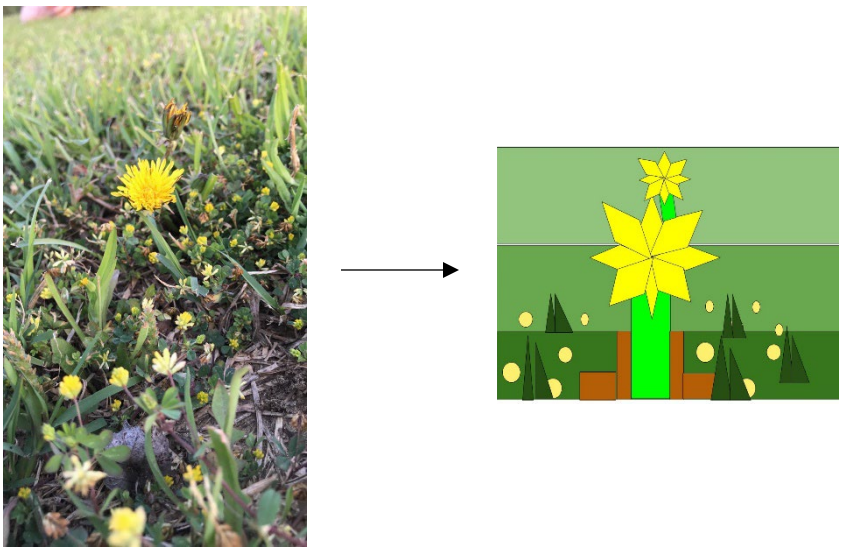
Following the critical analysis, they are instructed to do drawings of their image similar to how they abstracted the bull in the preliminary exercises to again better understand how to interpret the image as an abstraction. A worksheet for this process is attached below.

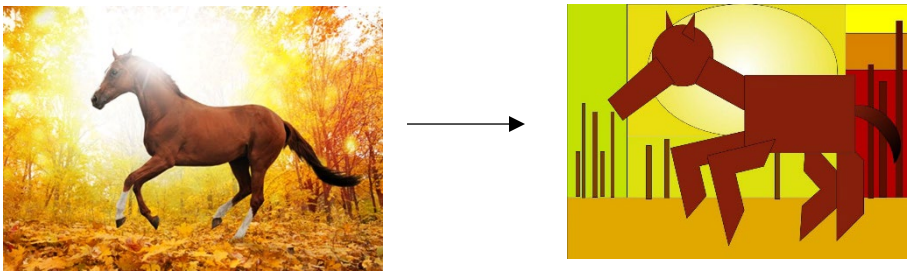
Here is a teacher's own work as an example of the process:

Before abstracting you'll be creating four drawings from the image as follows:

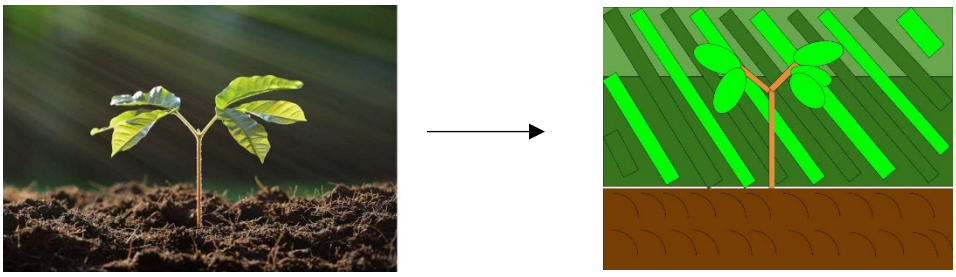
| | |
|---|---|
| a. Draw the image as realistically as possible | b. Draw your image with lines only (no shape) |
| c. Draw the image using shapes | d. Block in colors as they appear in the image (no line, no shape) |

Following these exercises, students are instructed to go to Google Draw or a similar program and create a digital rendering of their image. Most students will try to be accurate and include as much detail as possible in this phase of the abstraction. Below are student examples:



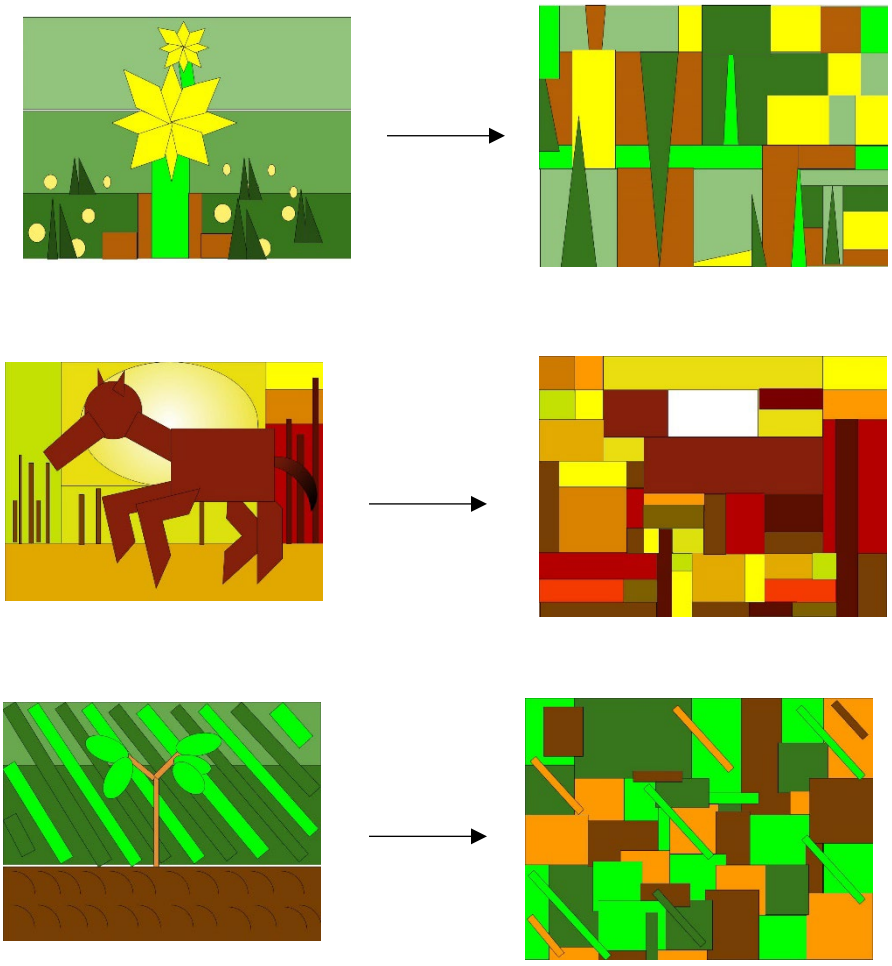


*Retrieved from: https://bit.ly/3asCW6K*



*Retrieved from: https://bit.ly/341vK0e*

Next, students are instructed to create a final abstraction. They are to use the information that is in their first abstraction as well as any information in their critical analysis to help them decipher the essentials that they need in order to interpret and create a final design.



In summary, students are asked to fill out a computational thinking assessment and evaluate how they used the concepts in their work. They are also asked to fill out a rubric evaluating their own efforts regarding their work.

**Materials**

Pencils, colored pencils, paper, iPad, chrome books or desktop computers, Google Draw or comparable program, access to a printer

**References**

Cindy Ingram, The Art Class Curator

https://artclasscurator.com/

# Art Rubric

Name: _____ Date: _____

Assignment: _____

| | Excellent Exemplary 5 | Above Average Very good Acceptable 4 | Average Good 3 | Below Average Barely Acceptable 2 | Unsatisfactory Needs Improvement 1 |
|---|---|---|---|---|---|
| Understanding and Application of Art Concepts | | | | | |
| Work Habit: Use of time Effort | | | | | |
| Craftsmanship Use of Materials Presentation | | | | | |
| Creativity Originality | | | | | |
| Assignment fulfilled/ completed | | | | | |

Comments:_____

_____

_____

_____

Grade (total points x 4): _____

**Computational Thinking Self-Assessment: Digital Mondrian**

Which approaches did you use? On each double-headed arrow line, mark and X to show how much you used each approach. Justify your response on the two writing lines.

**Tinkering**

**MIN** ⟷ **MAX**

**Creating**

**MIN** ⟷ **MAX**

**Debugging**

**MIN** ⟷ **MAX**

**Persevering**

**MIN** ⟷ **MAX**

**Collaborating**

**MIN** ⟷ **MAX**

# CAS V7:  and Contemporary Street Art

**Objective:** For this lesson, students will explore typography, Graffiti and Contemporary Street Art to facilitate creating their own personalized messages.

**NC Standards:**

- **8.V.1.2** Apply the Elements of Art and Principles of Design in the planning and creation of personal art.
- **8.V.2** Apply creative and critical thinking skills to artistic expression
- **8.CX.1.2** Analyze art from various historical periods in terms of style, subject matter and movements
- **8.CX.2.4** Exemplify the use of visual images from media sources and technological products to communicate in artistic contexts.

**21st Century Skills:** Creativity and Innovation, Critical Thinking and Problem Solving, Communication and Collaboration, Information Literacy, Media Literacy, ICT Literacy, Flexibility and Adaptability, Initiative and Self Direction

**Blooms Taxonomy**: Understand, Apply, Analyze, Evaluate, Create

| **Primary CT Concepts** |
| --- |
| **Algorithms, Decomposition, Patterns, Abstraction, Evaluation, Tinkering, Creating, Debugging, Persevering, Collaborating** |
| |

## Lesson Outline

This lesson has many parts that can be revised to best suit the needs of your classroom. The premise is to help students gain a better understanding of what is necessary in conveying a message, particularly one that might be viewed on a large scale in public, such as graffiti.

**Preliminary Lessons:**

**Typogaphy: (~40' session)**

Before introducing graffiti you can give students information regarding typography (https://createartwithme.com/intro-typography-lettering-basics/).

A major point to convey to students is how lettering and typography are an important part of visual communication.

Some preliminary exercises could include: having students find 5 fonts (in Microsoft Word) that they like and create their name using one of these fonts, varying size, color, position of the letters. (See attachment A)

Or they could write adjectives that describe themselves and then find a font that best expresses these qualities?

Or a questionnaire could be created prior to any information and have them research various fonts before any teaching occurs.

**Graffiti: (~4-5 40' class sessions)**

The next part of this lesson will focus on 'traditional' Graffiti.

Prompt: Ask students when they hear the word Graffiti what comes to mind?

Show examples of Graffiti art and have them list characteristics of the images. Hopefully they will mention some of the following: colorful, bold, unique, large, outdoors…

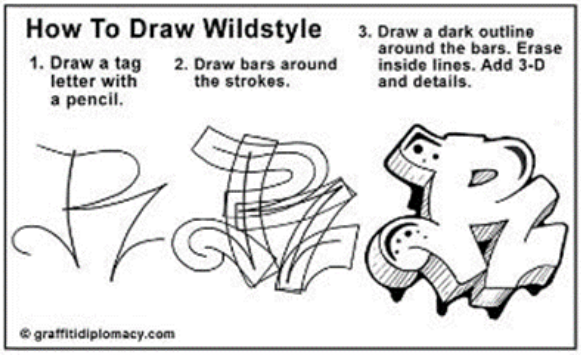
*Retrieved from: https://bit.ly/3h1n3XE*

Next, they will be creating their name or a word of their choice in a graffiti style.

Have the students practice writing their word/name in different tags.


From here you can demonstrate how Graffiti is developed around these initial tags

Students should pick a 'tag' that they like and draw it on a piece of 9x12 drawing paper. Then develop their word into a Graffiti image.




The Graffiti Diplomacy website has numerous examples that students can reference to help them develop their images. I have the students finish their images with markers and sharpies. One option is that they can cut out the word and put it on a colored background paper.



**Contemporary Street Art (1 40' session)**

Upon completion of their graffiti, begin a discussion regarding Contemporary Street Artists. You could show a slide comparing and contrasting a contemporary street artist with traditional graffiti. Banksy is very popular, but there are several others.

*Retrieved from: https://bit.ly/3asNYZJ*


*Retrieved from: https://www.rubenrojas.com/getinvolved*

In comparing you might point out how the traditional graffiti artist work is usually illegal. The intention is to make a bold statement, however, often it's not as decipherable as contemporary street artists.

You can also show them the following video on Youtube: (https://www.youtube.com/watch?v=yup09u166RU&list=PLMe06pFeKYomyYeU--v-djmQKLj2fmwaa). This highlights several street artists and their work.

**Lesson Outline: (~5 40' sessions)**

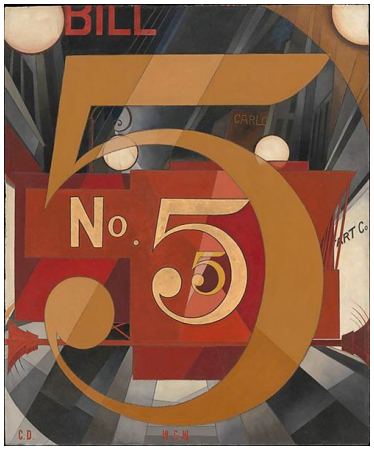
The next part of this lesson is to get students thinking about what they would like to convey in a 'street art message' and how they could do this.

**Charles Demuth:**

Begin by having the students recite the poem by William Carlos Williams titled *The Great Figure*. Ask them to list what imagery comes to mind upon hearing this poem. They can write or draw their responses.

Among the rain
and lights
I saw the figure 5
in gold
on a red
firetruck
moving
tense
unheeded
to gong clangs
siren howls
and wheels rumbling
through the dark city

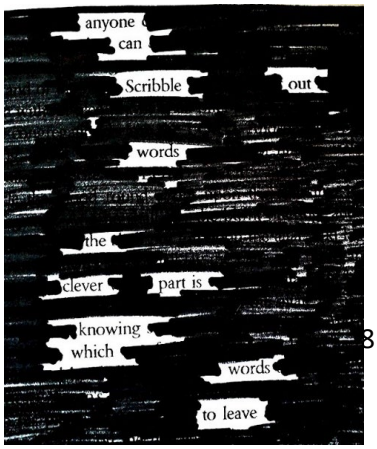
Next, show them the image by Charles Demuth titled *I Saw the Figure 5 in Gold*.




*Retrieved from: https://bit.ly/3h0cgwF*

Ask students what they see. This could be followed by a Critical Analysis of the work, with students describing the lines, shapes, colors as well as placement of the images. Next, I would ask the students how Demuth's image conveys the poem.

Students should be instructed that they will now be creating an image via Microsoft Paint, that conveys a message using words and possibly images. In order to discover the phrase or word that they would like to convey, they could do block out poetry project (/) or use their favorite quote from a novel they are reading. (I wouldn't let students just search the internet for common phrases, but would encourage them to discover something more meaningful of their own).




*Retrieved from: https://bit.ly/2E8pdpC*

Remind them of their work in Typography and Graffiti in the importance of simplicity void of extraneous detail in order to convey a message. Especially if the message was to be on a wall outside.

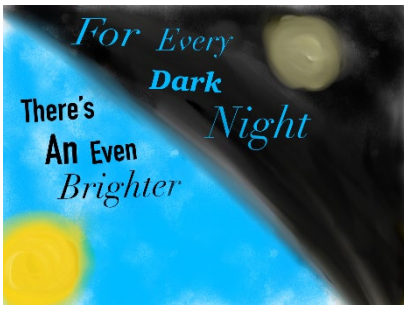
Once they have a phrase they want to use, they will need to start brainstorming and writing what comes to mind when they read the 'poem' or message they are going to 'illustrate'. They will need to do thumbnail drawings to work out how they'd like to portray it. Ask them: what needs to be emphasized? What colors will you use? How will you incorporate text into their work? What typeface and size would best convey the content? Will they use imagery? What images would best support the phrase.

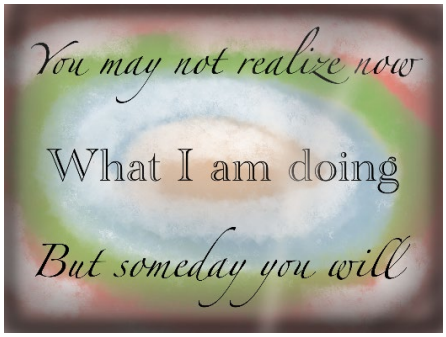
Finally, working in Microsoft Paint or a comparable program, they are to create their image. Before they begin their own designs, they should spend some time familiarizing themselves with the paint program and the various components that can be utilized in creating their images.

At the point that students are ready to create their own 'street art' images, I would first have them find passages that they like from a novel they are reading. In a word document have them type in the passage, and then get to the essence of what is important in the text, via black out or deleting less significant parts of the passage. They can alter size, font and placement in this process.

Next they can list what images, and colors they associate with the passage. They should do thumbnail drawings to work out their ideas before working in Microsoft Paint.

Next, they proceed to Microsoft Paint or a comparable program to 'illustrate" this text and any imagery. This could be through drawing and painting within the program or importing an image and 'rewriting' the text on top. The goal is to have them tinker as much as necessary to bring about an image that conveys the message while being cognizant of good design.


Images can be printed on large format paper ~12x18 or 18x24

Students should fill out the CT assessment as well as a rubric for grading purposes.

**Materials**

Scrap paper, 9x12 drawing paper, pencils, colored pencils, markers, erasers, computers, printer

**References**

Graffiti:

https://www.graffitidiplomacy.com/

Charles Demuth:

https://www.metmuseum.org/art/collection/search/488315

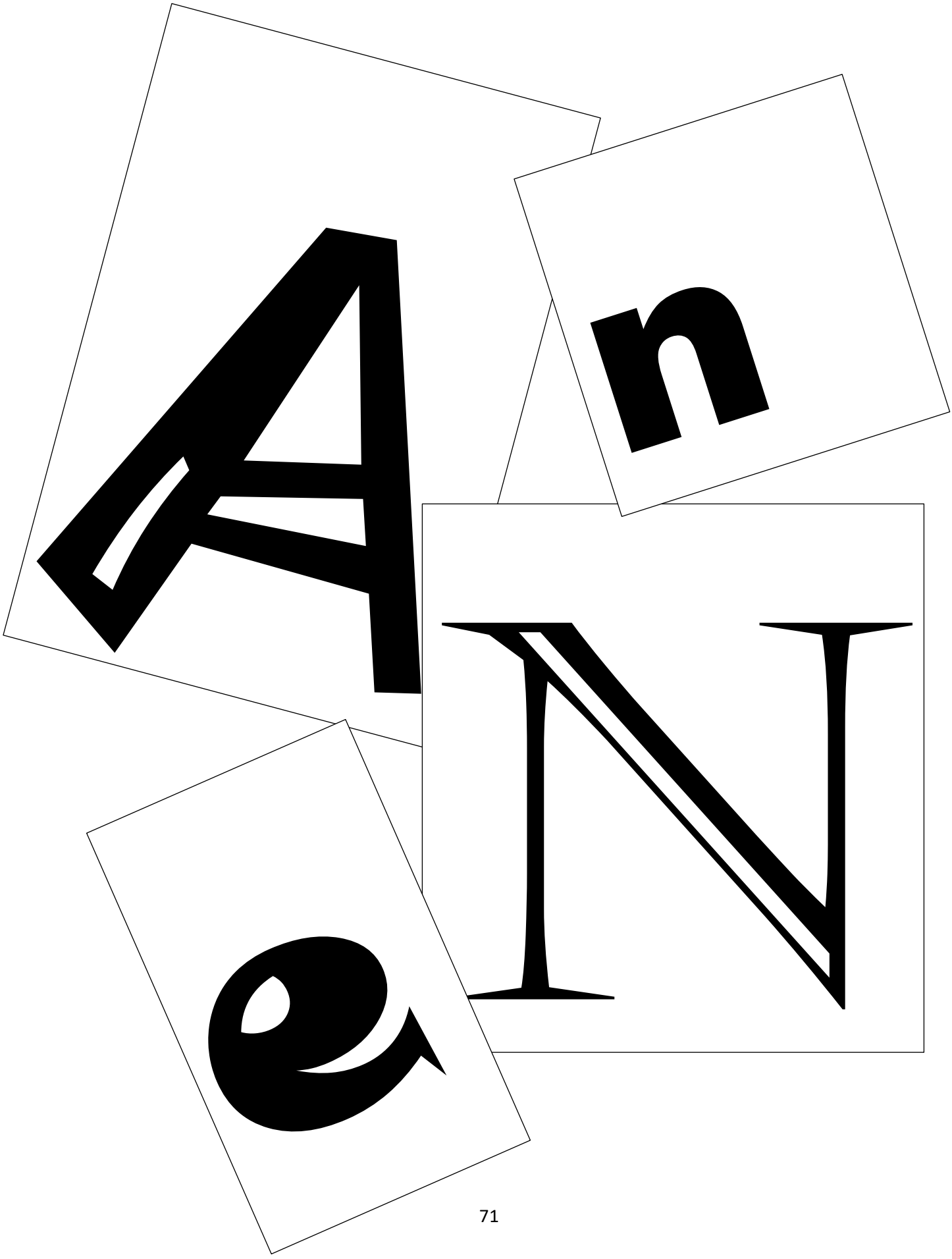
Create Art with Me – Michelle East:

https://createartwithme.com/intro-typography-lettering-basics/

https://www.youtube.com/watch?v=yup09u166RU&list=PLMe06pFeKYomyYeU--v-djmQKLj2fmwaa

Black out poetry:

https://justaddstudents.com/how-to-teach-blackout-poetry/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# Art Rubric

Name: _____ Date: _____

Assignment: _____

| | Excellent Exemplary 5 | Above Average Very good Acceptable 4 | Average Good 3 | Below Average Barely Acceptable 2 | Unsatisfactory Needs Improvement 1 |
|---|---|---|---|---|---|
| Understanding and Application of Art Concepts | | | | | |
| Work Habit: Use of time Effort | | | | | |
| Craftsmanship Use of Materials Presentation | | | | | |
| Creativity Originality | | | | | |
| Assignment fulfilled/ completed | | | | | |

Comments:_____

_____

_____

_____

Grade (total points x 4): _____

**Computational Thinking Self-Assessment: Graffiti/Street Art**

Which approaches did you use? On each double-headed arrow line, mark and X to show how much you used each approach. Justify your response on the two writing lines.

**Tinkering**

**MIN** ⟷ **MAX**

**Creating**

**MIN** ⟷ **MAX**

**Debugging**

**MIN** ⟷ **MAX**

**Persevering**

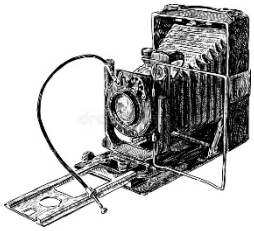
**MIN** ⟷ **MAX**

**Collaborating**

**MIN** ⟷ **MAX**

# CAS: V8 PHOTOGRAPHY

**Objective:** Students will look at the works of famous photographers to uncover what creates a compelling photographic image and then using prior knowledge of the Elements and Principles of art, they will create their own photographs, documenting their world.



**NC Standards:**

- **8.V.1.2** Apply the Elements of Art and Principles of Design in the planning and creation of personal art.
- **8.V.1.1** Use art vocabulary to evaluate art
- **8.V.1.2** Apply the Elements of Art and Principles of Design in the planning and creation of personal Art.
- **8.V.2.2** Apply observation skills and personal experiences to create original art
- **8.V.3.2** Use a variety of media to create art
- **8.CX.1.1** Understand the role of visual arts in North Carolina and the United States in relation to history and geography
- **8.CX.1.3** Analyze the effect of geographic location and physical environment on the media and subject matter of art from NC and the United States
- **8.CX.2.4** Exemplify the use of visual images from media sources and technological products to communicate in artistic contexts.

**21st Century Skills:** Creativity and Innovation, Critical Thinking and Problem Solving, Information Literacy, Media Literacy, ICT Literacy, Productivity and Accountability

**Blooms Taxonomy**: Create, Evaluate, Analyze, Apply, Understand

| **Primary CT Concepts** |
| --- |
| **Decomposition, Abstraction, Evaluation, Tinkering, Creating, Debugging, Persevering** |

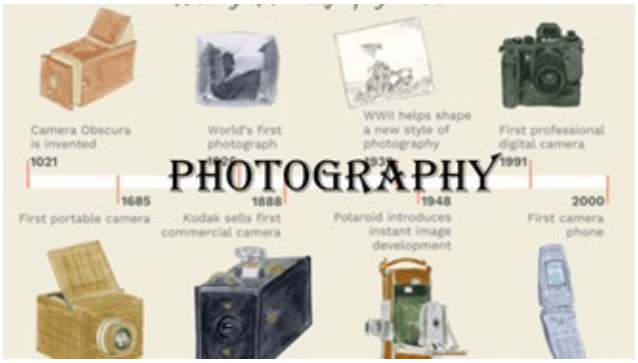
# Lesson Outline

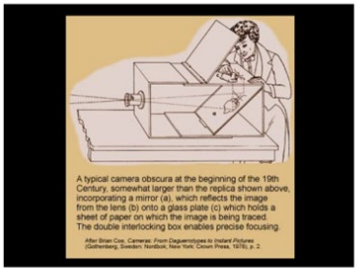
**Preface:** With the invention of smart phones, photographs are taken at alarming rates. However, oftentimes these photos are taken with little thought to composition or content. I feel that it is important to give students a basic understanding of the history and development of photography in hopes that they will gain a better appreciation for this medium. Through this lesson I also hope to get students to go beyond the candid images that they collect and think about design as well as what can make a copelling photograph.

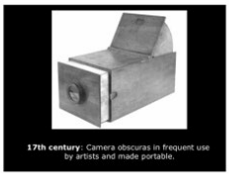
Much of this lesson is adapted from The Art Curator Site. It is designed to be taught before or in conjunction with the I Am From Lesson.

**Outline:** I start this lesson with a PowerPoint presentation regarding a brief history of photography, leading into photography as an art form. (below)

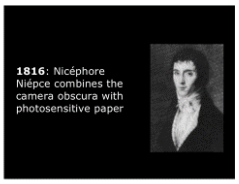
**PowerPoint**

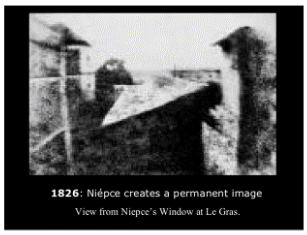


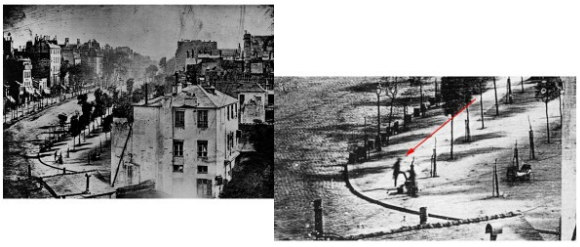



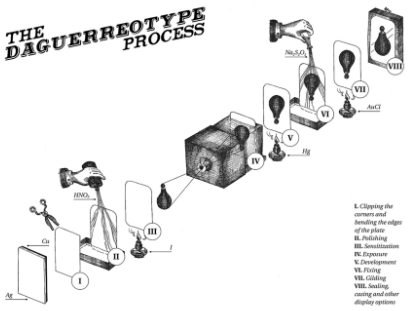

The first partially successful photograph of a camera image was made in approximately 1816 by Nicéphore Niépce, using a very small camera of his own making and a piece of paper coated with silver chloride, which darkened where it was exposed to light.



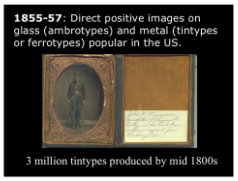




The next development in photography was the dageurrotype, which required long exposure time. This photo (1836) is the first to capture a person as they stopped on this street in France while the photographer was capturing the scene.



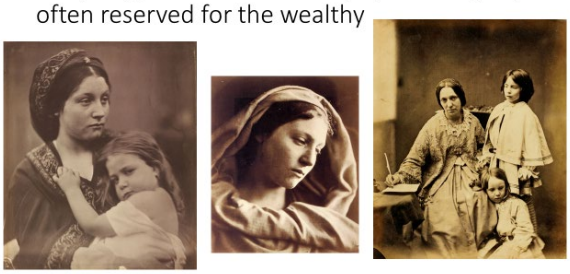



Photography continually progressed from long exposure times and elaborate developing processes of plates, till the development of rolls of film whereby a photographer could take multiple photos in one sitting.

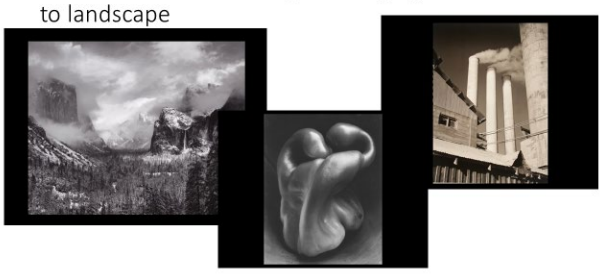



Early photographers documented the world around them including images of war, struggles of early immigrants and the realities of child labor…


Early on, portraits became a popular subject, often reserved for the wealthy

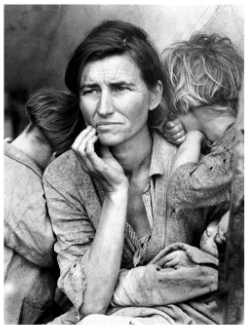


By the early 1900's photography was recognized as a valid art form with subjects ranging from still life to landscape



It would always be a form of journalism, documenting and recording people, places and events…

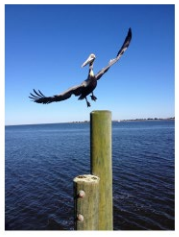

No matter what the purpose of the photograph, good design was and is important to creating a compelling image…



*Migrant Mother,* 1936 by Dorothea Lange

So what makes a photo compelling?

Cartier Bresson called it the decisive moment!



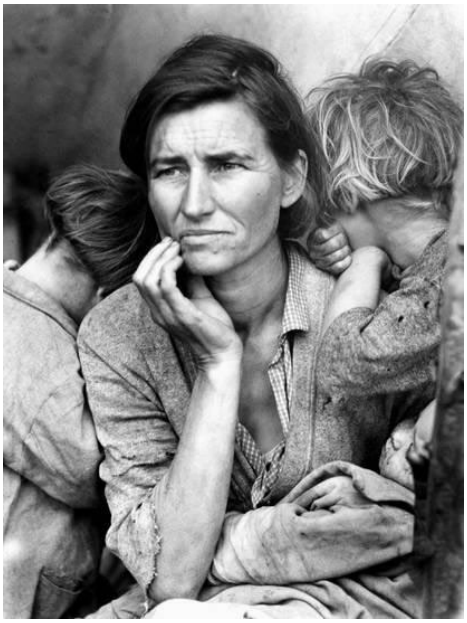
Lighting, composition and overall design are all important

Imagine that you are hired by the government today in 2019 to document life in Chinquapin.
What 'stories' would you tell?
What themes/subjects should you cover?
How can you tell those stories through photography?


How can you tell those stories through photography?




Towards the end of this PowerPoint, I show them the image of the Migrant Worker by Dorothy Lange. They are instructed to fill out a worksheet/critical analysis of the image. Note: the school that I teach at is in a rural area where farming is predominant. Thus, I chose the Migrant Worker image. There are equally compelling photographs out there that might suit the needs or your community better. Cindy Ingrams' Art Class Curator website is a wonderful resource for possibilities.
https://artclasscurator.com/?s=photography



*Retrieved from: https://bit.ly/3ax3ML5*

We then discuss the Critical Analysis as a class to try to uncover what were some of the things that the photographer did that helped to inform the final image or create a compelling photograph. One thing in particular that I like to discuss is what happens when there is no color used in an image and how does that impact the content?

Next I like to have them fill out the I am Character Poem, whereby they imagine they are one of the people in the picture. We read this aloud going from one student to the next. This seems to add to their understanding how good design can be effective in conveying a message. (https://en.wikipedia.org/wiki/Florence_Owens_Thompson)

At this point, I give them background information about The Migrant Mother.

**Photographs:** Next, students are asked to imagine being hired by the government today to document life in their community. I ask them what images they should capture. And what they would want to convey.

I list on the board possible subjects i.e., the buildings, the landscape, events (sports), the people. Students choose an area to focus on and are instructed to collect several images. They will need to use their phones, or iPads if available. I remind them of some of the compositional elements that other photographers have used to create compelling images. In particular, I ask them to consider the space, color, lighting and vantage point.

Once photos are collected, I ask them to find at least 3 of their strongest images. At this point they are asked to evaluate the image for its effectiveness and make any adjustments necessary to make the image as compelling as possible. This may entail, cropping, (zooming in on a part of their image), changing their images to black and white or adding a filter via a computer program or an app such as Distress FX (https://www.distressedfx.com/).

In completion students need to submit their strongest image for printing and grading.

This should be submitted with the Rubric as well as the Computational Thinking Assessment.

## Materials

Paper, pencils, cell phones, iPads or cameras, printer

## References

Cindy Ingram, Art Class Curator https://artclasscurator.com/?s=photography

https://en.wikipedia.org/wiki/Florence_Owens_Thompson

https://www.distressedfx.com/

# Critical Analysis of a Photograph

Name: _____

Look carefully at the image of the *Migrant Mother* by Dorothy Lange. What do you notice or see?

_____
_____
_____

What can you tell based on your observations? What does the photograph tell you about the people?

_____
_____
_____

Why do you think this photograph was made?

_____
_____

Next analyze the photo according to the elements of art and principles of organization.

Is there evidence of line in the photo? Elaborate.

_____
_____

Are there shapes? Elaborate.

_____
_____

Do you see any texture? Describe.

_____
_____

Is there any color?

_____

Has the artist utilized value in the work? Elaborate.

_____
_____

What about the space of the picture plane? Is it deep space or shallow space?

_____

What is the positive space? Is there much negative space?

_____

How is the picture balanced?

_____

Does your eye go to any one thing first (emphasis)?

_____

How does your eye move throughout the piece?

_____

Is there repetition in the picture?

_____

Is there evidence of variety in the photo?

_____

Does the image feel unified? How?

_____

Based on your initial observations…what do you think the artist is trying to convey in this image? What do you think it is about?

_____

_____

Has her use of the elements and principals of organization effectively conveyed this ‘message’?

_____

_____

Name: _____ Date: _____

"I am" Character Poem

Instructions: Imagine you are one of the characters in the artwork. Fill in the prompts as the character to write a poem that describes them.

I am_____.

I see_____.

I hear_____.

I say_____.

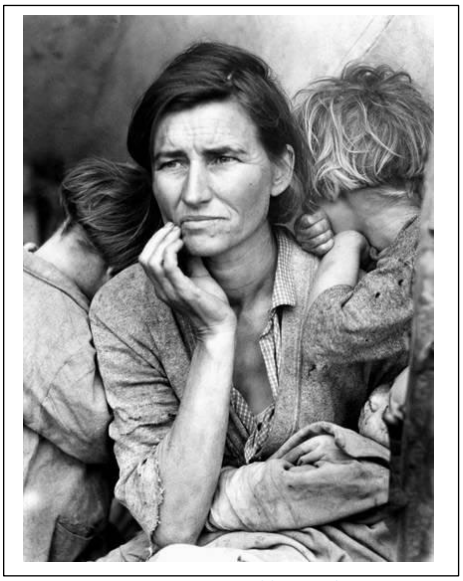
I feel_____.

I wonder_____.

I want_____.

I dream_____.

I am_____.



Retrieved from: https://bit.ly/3ax3ML5

# Art Rubric

Name: _____ Date: _____

Assignment: _____

| | Excellent Exemplary 5 | Above Average Very good Acceptable 4 | Average Good 3 | Below Average Barely Acceptable 2 | Unsatisfactory Needs Improvement 1 |
|---|---|---|---|---|---|
| Understanding and Application of Art Concepts | | | | | |
| Work Habit: Use of time Effort | | | | | |
| Craftsmanship Use of Materials Presentation | | | | | |
| Creativity Originality | | | | | |
| Assignment fulfilled/ completed | | | | | |

Comments:_____

_____

_____

_____

Grade (total points x 4): _____

**Computational Thinking Self-Assessment: Photography**

Which approaches did you use? On each double-headed arrow line, mark and X to show how much you used each approach. Justify your response on the two writing lines.

**Tinkering**

**MIN** ⟷ **MAX**

**Creating**

**MIN** ⟷ **MAX**

**Debugging**

**MIN** ⟷ **MAX**

**Persevering**

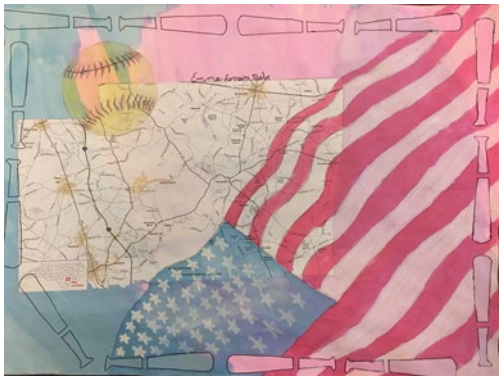
**MIN** ⟷ **MAX**

**Collaborating**

**MIN** ⟷ **MAX**

# CAS V9: I am from...sights of home

**Objective:** For this project, students will be creating a mixed media portrait of where they are from.



**NC Standards:**

- **8.V.1.1** Use art vocabulary to evaluate art
- **8.V.1.2** Apply the Elements of Art and Principles of Design in the planning and creation of personal Art.
- **8.V.2.2** Apply observation skills and personal experiences to create original art
- **8.V.3.2** Use a variety of media to create art
- **8.CX.1.1** Understand the role of visual arts in North Carolina and the United States in relation to history and geography
- **8.CX.1.3** Analyze the effect of geographic location and physical environment on the media and subject matter of art from NC and the United States
- **8.CX.2.4** Exemplify the use of visual images from media sources and technological products to communicate in artistic contexts.

**21st Century Skills:** Creativity and Innovation, Critical Thinking and Problem Solving, Information Literacy, Media Literacy, ICT Literacy, Productivity and Accountability

**Blooms Taxonomy**: Create, Evaluate, Analyze, Apply, Understand

| Primary CT Concepts |
| --- |
| **Decomposition, Patterns, Abstraction, Evaluation, Tinkering, Creating, Debugging, Persevering, Collaborating** |
| |

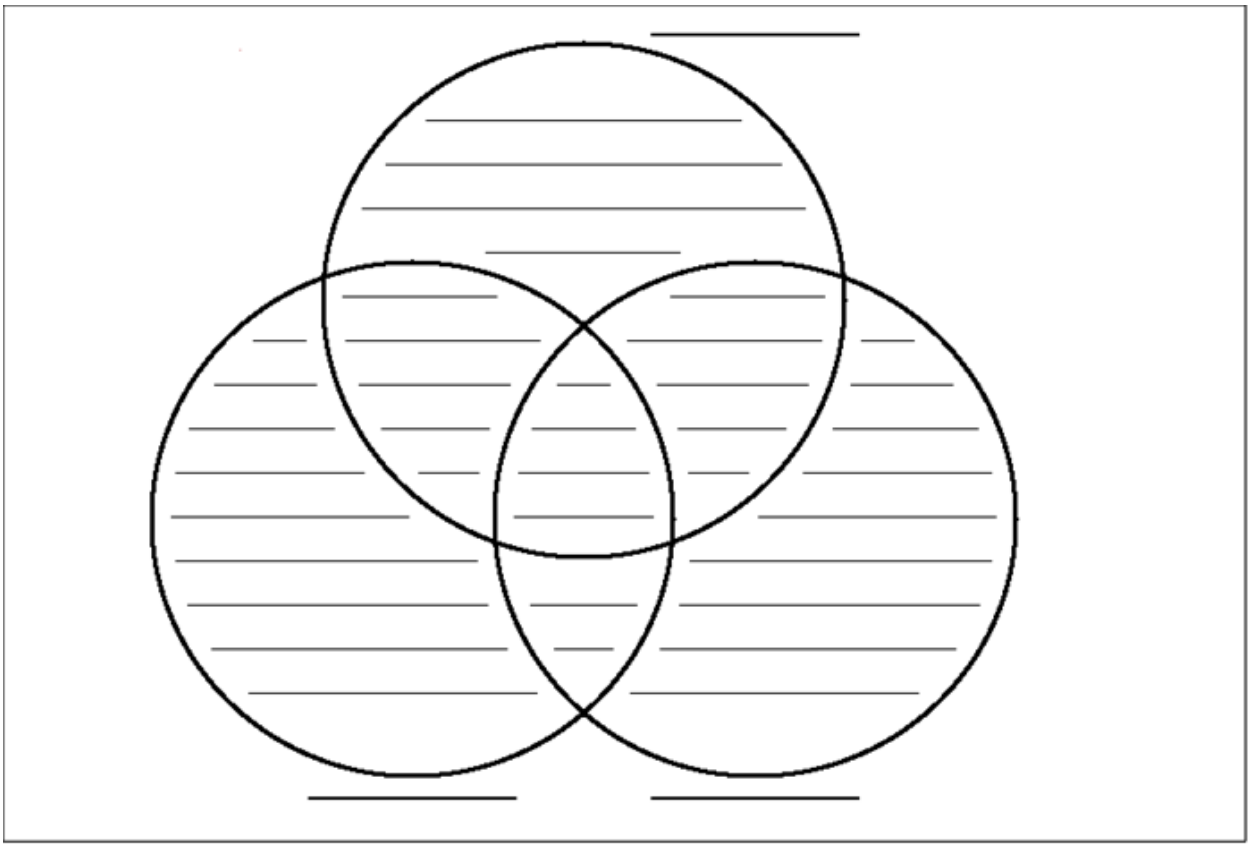
**Lesson Outline**

To begin this project students will compare and contrast of the following artists:

Ed Fairburn, *This isn't Happiness*
*Retrieved from:*
*https://bit.ly/3iTL970*

Ekaterina Panikanova's *Errata Corrige*
*Retrieved from: https://bit.ly/2Q5FmiE*


Jane Quick to See Smith, *House*
*Retrieved from: https://bit.ly/31aIFvg*



We discuss their findings. In particular I try to get them to discover the layering that these artists have used in their work as well as their varied interpretations of place.

At this point, you can give the students background information about the artists and their work.

- Ed Fairburn draws and integrated portraits onto maps, noting that we are essentially a part of the landscape.
- Ekaterina Panikanova paints images from childhood on top of books, trying to evoke the long lost world of childhood.
- Jane Quick to See Smith has used collages of newspaper articles under her painted images to portray and comment on her Native American heritage.

Next, students are instructed that they will be creating a mixed media 'portrait' of where they are from. Their images should be personal and meaningful while being cognizant of good design. It must exhibit some sort of layering as seen in the examples.

I give them the worksheet below and ask them to begin by listing all the sights and sounds that come to mind when they think of home. From here they are asked to circle 3 of the most significant items.

From here, I ask them to do thumbnail sketches to work out their ideas. Students are encouraged to use mixed media and techniques, including but not limited to digital images, maps, printing, painting, collage, sculpture, stitching and weaving.

**Note:** This lesson is done after a lesson in photography where the students take photos of their environment. The photographic images could also be used in their final piece.

**I am from (worksheet)**

Prior Knowledge:
When you think of where you are from what comes to mind? List at least 10 things (this can include sights, sounds, smells, or colors):

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Circle 3 things that are the most significant.

Next you'll need to envision how you'd like to present these ideas. What will your piece look like**? Layering must be a part of your piece, whether you draw into a background or collage…**

What materials will you use to present your image? You can use photos, maps, collage, printing, painting, drawing, stitching, weaving and sculpture.

Note: Things may be added or changed as you progress with the final piece, so be open to the process. However, once you cut, glue or stitch something down, it may be hard to retract these additions, so be sure to lay out your 'collage; and make any adjustments to your design, before doing any gluing.

As you progress with your piece make sure you have a good design that is balanced, and unified.
In the space below, sketch your design. (Your final image needs to be ~18x24)

The lesson generally takes ~2 weeks or 10  40’ minute classes.

## Materials

Assorted papers, pencils, colored pencils, paint, maps, printed materials, yarn, needles, glue, tracing paper, stencils, computers, printer

## References

https://edfairburn.com/?page_id=1919

https://www.ignant.com/2015/01/15/book-paintings-by-ekaterina-panikanova/

https://www.jaunequicktoseesmith.org/

# Art Rubric

Name: _____ Date: _____

Assignment: _____

| | Excellent Exemplary 5 | Above Average Very good Acceptable 4 | Average Good 3 | Below Average Barely Acceptable 2 | Unsatisfactory Needs Improvement 1 |
|---|---|---|---|---|---|
| Understanding and Application of Art Concepts | | | | | |
| Work Habit: Use of time Effort | | | | | |
| Craftsmanship Use of Materials Presentation | | | | | |
| Creativity Originality | | | | | |
| Assignment fulfilled/ completed | | | | | |

Comments:_____

_____

_____

_____

Grade (total points x 4): _____

**Computational Thinking Self-Assessment: I am from…sights of home**

Which approaches did you use? On each double-headed arrow line, mark and X to show how much you used each approach. Justify your response on the two writing lines.

**Tinkering**

**MIN** ⟷ **MAX**

**Creating**

**MIN** ⟷ **MAX**

**Debugging**

**MIN** ⟷ **MAX**

**Persevering**

**MIN** ⟷ **MAX**

**Collaborating**

**MIN** ⟷ **MAX**

# CAS V10: Moving Pictures and Claymation

**Objective:** Students will learn about the history of film. In particular, Muybridge's contributions to this field. They will then develop their own animated films using clay models.

*Retrieved from: https://bit.ly/34fiUM2*

**NC Standards:**

- **8.V.1.2** Apply the Elements of Art and Principles of Design in the planning and creation of personal Art.
- **8.V.2.1** Create art that uses the best solutions to identified problems.
- **8.V.3.2** Use a variety of media to create art
- **8.CX.2.2** Analyze skills and information needed from visual arts to solve problems in art and other disciplines
- **8.CX.2.3** Use collaboration to arrive at effective solutions to identified problems.
- **8.CX.2.4** Exemplify the use of visual images from media sources and technological products to communicate in artistic contexts.

**21st Century Skills:** Creativity and Innovation, Critical Thinking and Problem Solving, Communication and Collaboration, Information Literacy, Media Literacy, ICT Literacy, Flexibility and Adaptability, Initiative and Self Direction, Social and Cross Cultural Skills, Productivity and Accountability

**Blooms Taxonomy**: Create, Evaluate, Analyze, Apply, Understand

| **Primary CT Concepts** |
| --- |
| **Logic, Algorithms, Decomposition, Abstraction, Evaluation, Tinkering, Creating, Debugging, Persevering, Collaborating** |
| |

## Lesson Outline

I begin this project by instructing students in the history of film. In particular I focus on EADWARD MUYBRIDGE and his development of the Zoopraxiscope. The following video explains his work and inventions:

The development of the Zoetrope also allowed people to view images in motion.

“The zoopraxiscope, along with the zoetrope and the thaumatrope, could be considered forerunners of today's motion display technologies … all of which create an effect of motion by presenting discrete but closely-related images one after the other.”

### PowerPoint

**Flip Books**

To help students build their understanding of film and sequential art, I begin by having them make flip books. There are several good tutorials out there. I've used the tutorials and information from The Art Class Curator (); from The Art of Education (); as well as the following YouTube tutorial:

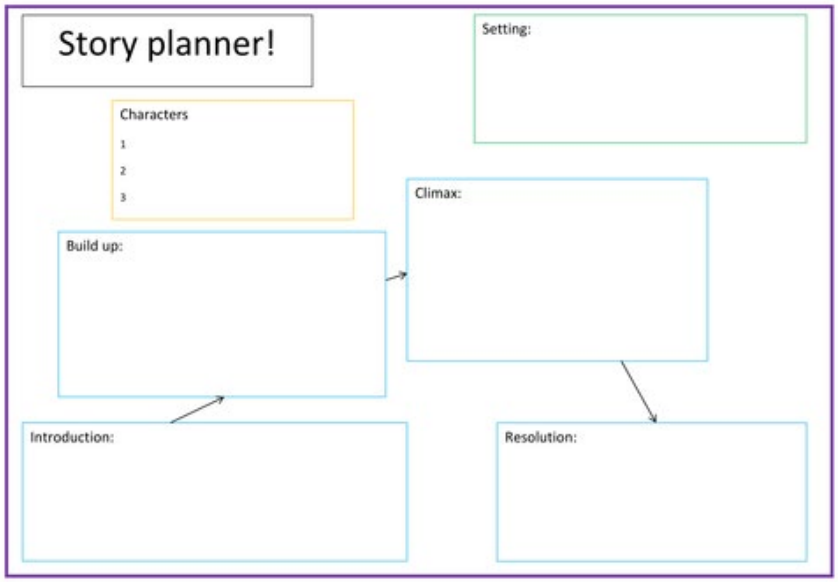
Students are given small sticky note pads and pens to create a very simple flip books based on the tutorial from YouTube. They are instructed to draw a moving circle, a moving line, and then a moving stick figure.

Another part of film is developing a storyline, so we do one final flip book, whereby they develop a simple story. This could be a plant growing out of the ground, or the sun rising and setting. They work their story out on the templates (file:///D:/iCS4All/37.1FlipBookTemplate.pdf) and then can cut them out and clip them together to see the story in motion or they can redraw their image on another post-it note book.

**Claymation Planning**

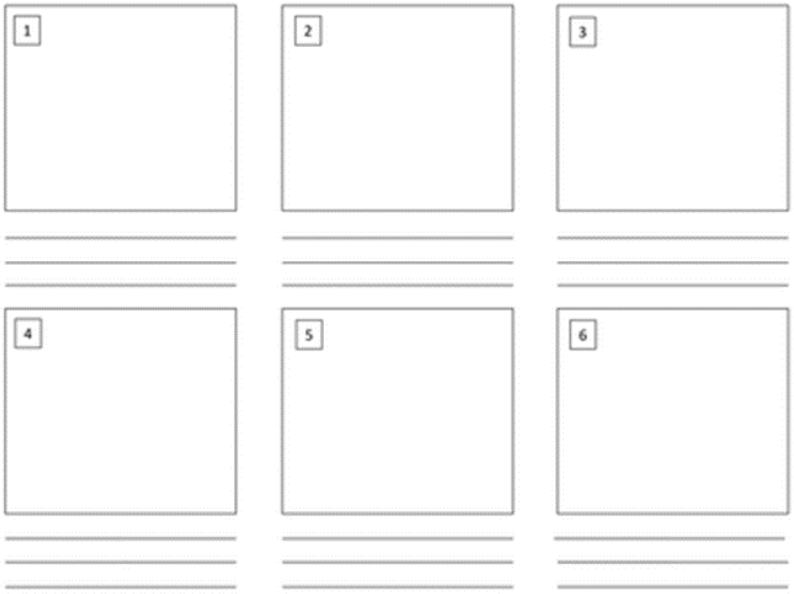
For this part of the project, I break up the classroom into groups of 3-4 students. They are instructed that they will be creating a short video 3-5 minutes in length. They will need to plan with their group the following:

- What 'story' will you tell…theme
- What are the parts of the story…characters, setting, conflict/plot and resolution




- What materials will you need? While primary characters will be made out of plasticine clay, they may use other stationary props from varied materials.

Next they should start planning/drawing the various frames that they will be recording.




It is important to let them know that motions should be subtle and that the more pictures that they take the more effective the final film will be. In other words, if they jump from someone sitting down to standing up, it could cause the final film to look somewhat erratic.

**Creating:**

Once the students have finished the planning stages of their film, they are ready to start creating their 'characters' and props, using plasticine clay and other varied materials.

**Production:**

They will be filming their story using the Stop Motion App on an iPad, iPad stands, and a green screen. Students should run the video from time to time to make necessary additions or deletions to their film. Encourage students to be as creative as possible, varying lighting and vantage point in filming.

To keep this as authentic as possible, I like for the students to draw their own background in Do Ink.

They can also create any musical accompaniment in Garage Band.

At this point, all the film clips are meshed together in iMovie and Music or sound is added. Students need to add 'credits' to their film.

Final films should be shared with the whole class.

Students can fill out the Rubric and Computational Thinking Assessment.

**Materials**

Handouts, post-it note pads, paper, pencils, plasticine clay, mixed media for props, iPads, iPad stands, Green Screen kit (lights, green screen, clips), Stop Motion app, iMovie app, Garage Band app.

**References**


The Art of Education https://theartofeducation.edu/packs/digital-animation/

Art Class Curator https://artclasscurator.com/high-school-photography-lessons/

YouTube tutorial on flip books:

https://www.youtube.com/watch?time_continue=5&v=Njl-uqnmBGA

YouTube tutorial on the Green Screen:

https://www.youtube.com/watch?v=_ppedXZHhE0&t=194s


# Art Rubric

Name: _____ Date: _____

Assignment: _____

Comments:_____
_____

| | Excellent Exemplary 5 | Above Average Very good Acceptable 4 | Average Good 3 | Below Average Barely Acceptable 2 | Unsatisfactory Needs Improvement 1 |
|---|---|---|---|---|---|
| Understanding and Application of Art Concepts | | | | | |
| Work Habit: Use of time Effort | | | | | |
| Craftsmanship Use of Materials Presentation | | | | | |
| Creativity Originality | | | | | |
| Assignment fulfilled/ completed | | | | | |

_____
_____

Grade (total points x 4): _____

**Computational Thinking Self-Assessment: Claymation**

Which approaches did you use? On each double-headed arrow line, mark and X to show how much you used each approach. Justify your response on the two writing lines.

**Tinkering**

**MIN** ⟷ **MAX**

**Creating**

**MIN** ⟷ **MAX**

**Debugging**

**MIN** ⟷ **MAX**

**Persevering**

**MIN** ⟷ **MAX**

**Collaborating**

**MIN** ⟷ **MAX**

# CAS V11: Tactile Picture Books

**Objective:** Students will create 3 dimensional images based on children's stories and, in turn, create a tactile picture book that could aid a person who is visually impaired.

**NC Standards:**

- **8.V.2.1** Create art that uses the best solutions to identified problems.
- **8.V.3.2** Use a variety of media to create art
- **8.V.3.3** Evaluate techniques and processes to select appropriate methods to create art.
- **8.CX.2.2** Analyze skills and information needed from visual arts to solve problems in art and other disciplines
- **8.CX.2.4** Exemplify the use of visual images from media sources and technological products to communicate in artistic contexts
- **8.CX.2.4** Exemplify the use of visual images from media sources and technological products to communicate in artistic contexts.

**21st Century Skills:** Creativity and Innovation, Critical Thinking and Problem Solving, Communication and Collaboration, Information Literacy, Media Literacy, ICT Literacy, Flexibility and Adaptability, Initiative and Self Direction, Social and Cross Cultural Skills, Social and Cross Cultural Skills, Productivity and Accountability

**Blooms Taxonomy**: Create, Evaluate, Analyze, Apply, Understand

| **Primary CT Concepts** |
| --- |
| **Logic, Algorithms, Decomposition, Abstraction, Evaluation, Tinkering, Creating, Debugging, Persevering, Collaborating** |
| |

## Lesson Outline

Note: Prior to doing 3D printing and tactile books, I like to do a lesson on Film and Claymation to build students understanding of sequential art.

To begin the tactile picture book lesson, I question students to uncover any prior knowledge regarding 3D printing.

Next, I show them the following YouTube video to help them understand how 3D printing works:

I'll ask them to think about possible applications for 3D printing. After brainstorming ideas, I introduce them to tactile picture books.

I instruct them that they will each be given a part of a children's story that they will need to illustrate and recreate into 3D images.

**3D programs**

First, students need to familiarize themselves with drawing and creating in 3D computer programs. Using Tinkercad, I demonstrate for students how to create a ring and attach your initials. Students then need to measure their finger in millimeters and proceed to create their own rings. These are sent to my email to be printed out.

**Tactile books**

For the tactile book portion of this project, I chose to use the Giving Tree by Shel Silverstein. Other possibilities could be Harold and the Purple Crayon by Crockett Johnson or Goodnight Moon by Margaret Wise Brown or another possibility is for the students to create their own story. Depending on the number of students, you can illustrate the whole text or take significant portions of the text that will still convey the story. Using the following handout, students work out their ideas in writing and drawings.

Name: _____

Tactile Picture Books

The Giving Tree in 3D

Tactile pictures, pictures that have physical dimension, can help explain things to a visually impaired child. Tactile versions of volcanoes, dinosaurs, or a tree can give a visually impaired child an idea of what it looks like, as a tactile image of a tree can be touched but a real tree can never be perceived as a whole.

A tactile picture can be defined as a picture made in relief that can be read with your fingers. The main principle is that the **pictures should be simple and lack detail**, and that the **structures must be perceptible.**

Tactile picture books communicate information through touch. The illustrations in tactile picture books are in relief so that they can be read with the fingers.

**Tactile Pictures Procedure**

Read the text that you'll be illustrating. Analyze the visuals and answer the following questions.

What part of the story will you be recreating?

_____

_____

Which are the most important parts of the picture?

_____

_____

What elements in the picture add something to the story?

_____

_____

When you have identified the most important parts, make a sketch that will best convey the text that you've been assigned.

Note: when drawing the tactile picture:

- Don't use shadows. Shadows are used by the sighted to illustrate volume. There are no shadows in the world of the blind.
- Avoid perspective as it is a difficult concept for the blind child to understand that objects which are far away are smaller than those which are close by.
- When depicting a human being or humanized animal, the person should either be shown from the front or in profile. Always show the whole body. Always show both arms and legs. Be sure the arms stand out from the body; otherwise it will be difficult for a blind person to discern them.
- Remember that objects in a picture book should always have the same proportions and size throughout the book.

When students have finished the handout, they can find images online and transfer them into a vector graphic using inkscape is necessary for Tinkercad. ; or they draw directly in Tinkercad. I give them size parameters (~80-90 mm square and 3 mm high) so that their images are consistent.

Images are sent to me via email for printing.

**Alternative/addition to lesson**

If there is not enough text to be distributed amongst students, I have also created vocabulary lists from the text and have students 'illustrate' their word. In Tinkercad, they can create a background plate that shouldn't be more than .5 mm high and 60-80 mm square. They can draw their image onto the plate and add the word in braille.

**Materials**

Worksheets, pencils, iPads or desktop computers, 3D printer, cardstock paper to mount final images, glue sticks

**References**

http://spolearninglab.com/curriculum/lessonPlans/lang_arts/tactile_picture_books_lesson.html#

https://www.tinkercad.com

https://www.youtube.com/watch?v=1PX3KrwgLNc

https://ultimaker.com/software/ultimaker-cura

https://video.search.yahoo.com/search/video?fr=tightropetb&p=what+is+Three+d+printing#id=1&vid=a6e78acac1cafc9cf45e42101af46d03&action=view

https://inkscape.org/

# Art Rubric

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Assignment: _____

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|---|---|---|---|---|---|
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| Work Habit: Use of time Effort | | | | | |
| Craftsmanship Use of Materials Presentation | | | | | |
| Creativity Originality | | | | | |
| Assignment fulfilled/ completed | | | | | |

Comments:_____

_____

_____

_____

Grade (total points x 4): _____

Which approaches did you use? On each double-headed arrow line, mark and X to show how much you used each approach. Justify your response on the two writing lines.

**Tinkering**

**MIN** ⟷ **MAX**

**Creating**

**MIN** ⟷ **MAX**

**Debugging**

**MIN** ⟷ **MAX**

**Persevering**

**MIN** ⟷ **MAX**

**Collaborating**

**MIN** ⟷ **MAX**

## Culminating Activity

## CAS V12: Personal Visual Arts Portfolio

Use PowerPoint (or other software of your choice) to compose and narrate a portfolio of curricular activity systems responses for the year.