



WINTER 2018 ARTS INTEGRATION & STEAM ONLINE CONFERENCE

Full Live Day Handout Packet

EDUCATIONCLOSET.COM



THE BASIC DOODLE ASSESSMENT



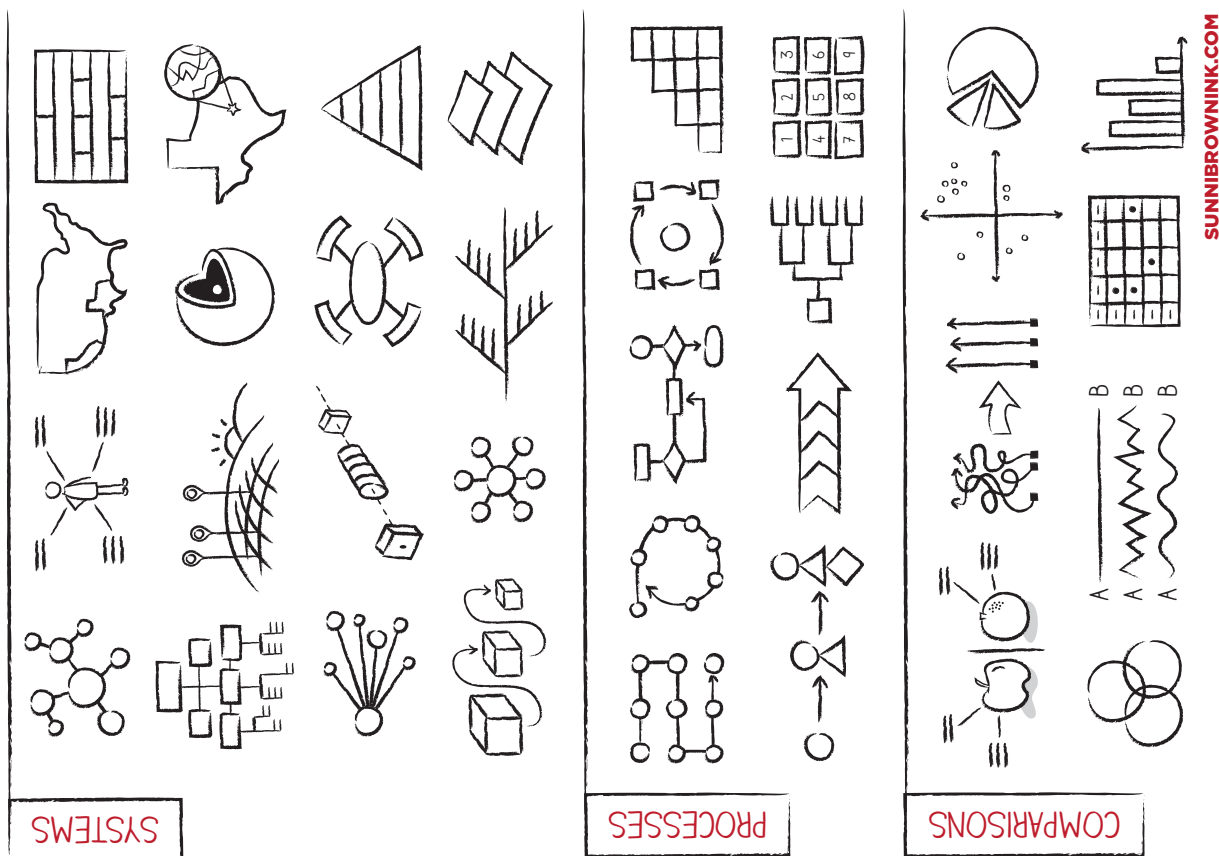
- **SUSPENDING JUDGMENT ABOUT DOODLING**
Moving past personal and cultural biases to explore this tool.
- **OVERCOMING YOUR OWN CRITICISM ABOUT YOUR STYLE**
You know what I mean.
- **DOODLING STRAIGHT LINES**
Just straight enough so viewers don't think they're curved.
- **DOODLING BASIC**
Making forms recognizable as circles, squares, triangles, etc.
- **DOODLING FACES AND FACIAL EXPRESSIONS**
Being able to show a variety of human emotions.
- **DOODLING BASIC FIGURES**
Generating the most simplistic forms of humans and animals.
- **SEEING THE OUTLINES & STRUCTURE OF OBJECTS**
Deconstructing a form with your mind's eye.
- **SHARING YOUR WORK WITH OTHERS**
Moving past concern about others' opinions in order to learn.

SUNNIBROWNINK.COM



The purpose of **PROCESS MAPS** is to show pictures of verbs. These maps display ways to see the world through mechanism and motion, process and dynamics, cause and effect, explanation and narrative. Process maps are often used to reach conclusions and make decisions, so these are particularly valuable in organizations working to optimize, align, streamline, etc. Outside of a work context, process maps illuminate endless interesting topics like how cupcakes make your buns fat or how a bill becomes a law. (You know you saw that last one in school.)

Because I know you're paying close attention, I'd like to acknowledge something that may be puzzling you: Yes, these maps are often inclusive of each other. In the real world, you'll necessarily encounter what we can call "combination maps," which are maps that visualize and intertwine both systems and processes. Fun, huh?



THE INFO- DOODLE ASSESSMENT



- **MASTERING ILLEGIBLE HANDWRITING**
Writing *just* clearly enough to be understood.
- **FORGIVING YOURSELF FOR SPELLINK ERRORS**
Laughing them off & moving on. *Aaaand* realizing that no one else can spell either.
- **BELIEVING THAT INFO-DOODLING $\neq$ ART**
Knowing you'll never need "art" to Infodoodle.
- **WORKING w/TYPOGRAPHY**
Exploring letter forms to support communication.
- **DOODLING WORD PICTURES**
Creating words using pictures.
- **IMAGINING METAPHORS TO SHOW CONCEPTS**
Using your mind's eye to find shared ways to represent an idea.

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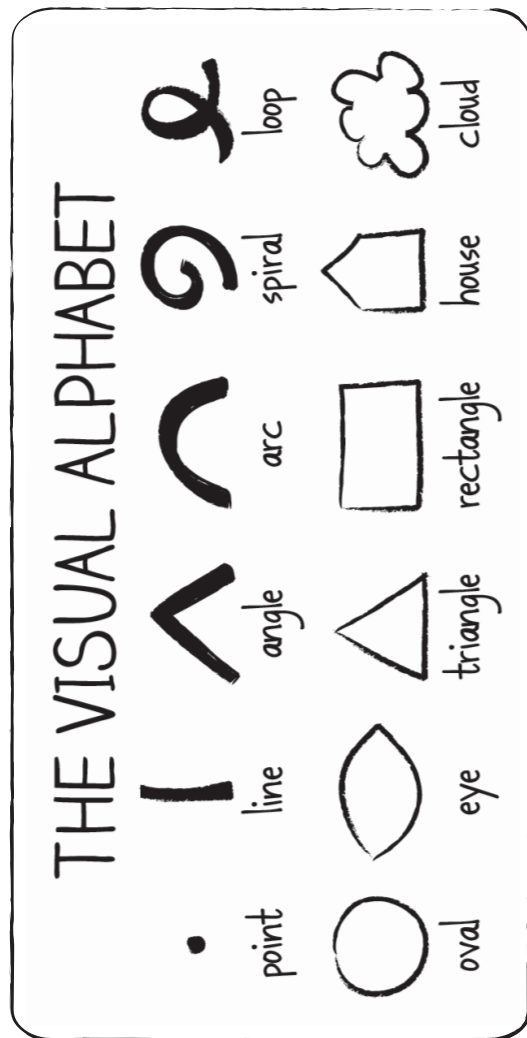
THE INFO- DOODLE ASSESSMENT (CONT.)



- **DOODLING SHADOWS & SHADING**
Giving volume and dimension to objects.
- **USING COLOR APPROPRIATELY**
Adding emphasis and meaning through color.
- **SHOWING RELATIONSHIPS BETWEEN INFO**
Mapping interactions & indicating relationship types.
- **DISCERNING RELEVANT CONTENT**
Discarding linguistic fluff and homing in on what matters.
- **DISTILLING VERBAL CONTENT IN REAL TIME ***
Taking accurate notes of the core of a conversation as it happens.

* This one is not relevant for Off-Air Personal Infodoodling.

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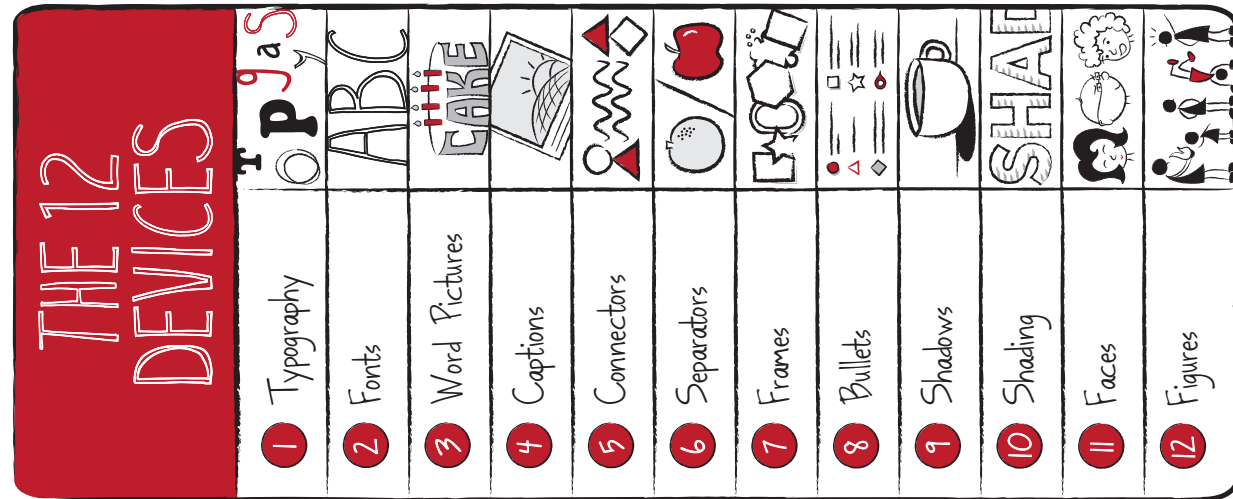


Behold, the **VISUAL ALPHABET**—a 12-letter alphabet that allows even the most hopeless of artists to visually articulate anything with minimal practice. I want to bestow this gift upon you because you'll need it on your rise to visual-thinking greatness. The Visual

Alphabet is composed of twelve "letters," which are the visual equivalent of alphabetic letters. The top row of these letters are what we call "forms," meaning that they're visual marks that do not close in on themselves. The bottom row are called "fields," meaning that they fold back in on themselves, forming a closed visual field. This alphabet (native to you, by the way) includes every simple mark you need to produce a visual representation of some idea, object, or concept in the world. Literally everything in your wildest dreams can be reproduced with these 12 letters.

Here you see another important set of tools for your kit known as **THE 12 DEVICES**.

These devices form the basis for more elaborate visual displays. They require more practice than the Visual Alphabet, but once you get the hang of them, the applications are endless. Depending on the type of display you're building—a system map, process map, or comparison map—you'll likely end up needing most if not all of the Big 12. Start with the ones you feel comfortable adopting and gradually embed the more sophisticated devices over time. Like the Visual Alphabet, the 12 Devices are also instinctive, so they'll often emerge naturally as the need arises.



From SUNNIBROWNINK.COM

PAPER ELECTRONICS RESOURCES LIST

NOTE: For the friendly online version (and to add your own links!) go to the document at: <https://tinyurl.com/chibitronics>

And if you have questions, you can contact Jie Qi at info@chibitronics.com

CHIBITRONICS:

- ☐ **Site:** <http://chibitronics.com/>
- ☐ **Facebook:** <https://www.facebook.com/circuitstickers/>
- ☐ **Twitter:** <https://twitter.com/chibitronics>
- ☐ **Instagram:** <https://www.instagram.com/chibitronics/>
- ☐ **Video tutorials:** <https://chibitronics.com/how-to/>
- ☐ **Full Circuit Sticker Sketchbook download:** <http://bunniefoo.com/chibi/sketchbook-en-v1.pdf>
- ☐ **Simple card template:** https://chibitronics.com/chibi_simple_template/

LOVE TO CODE:

- ☐ **Love to Code:** <https://chibitronics.com/lovetocode/>
- ☐ **Text editor:** <https://ltc.chibitronics.com/>
- ☐ **Makecode block editor:** <https://makecode.chibitronics.com/>
- ☐ **Conductive patch tutorial:** <http://chibitronics.com/conductive-fabric-circuit-patches/>
- ☐ **Soldering on paper tutorial:** <http://chibitronics.com/how-to-solder/>
- ☐ **USB cable hack tutorial:** <https://chibitronics.com/usb-power/>

PRESENTATIONS & SLIDES:

- ☐ **Jie's PhD defense presentation:** <https://www.youtube.com/watch?v=Zhvtm3z7cP4>
- ☐ **ISTE & SEPT (June 2016):** https://dl.dropboxusercontent.com/u/14193394/ISTE_2016.pdf
- ☐ **ISTE 2017:** <https://docs.google.com/presentation/d/1uQTIjxnaMPraKRaikuBoCwFL0i4wLNHlPuBix-NI5Q8/edit?usp=sharing>

VIDEOS & PROJECT PAGES:

- ☐ **Electronic Pop-up Book:** <http://technolojie.com/454/>
- ☐ **Self-folding paper:** <http://technolojie.com/inputoutput-paper/>
- ☐ **Dandelion Painting:** <http://technolojie.com/pu-gong-ying-tu-dandelion-painting/>
- ☐ **Heart blush card:** <https://www.youtube.com/watch?v=HMI2UXk-As0>
- ☐ **Circuit Stickers intro:** <https://vimeo.com/79645054>
- ☐ **Sample Sketchbook:** <https://www.youtube.com/watch?v=6jUhnLCJ5z8>

MATERIALS & TOOLS:

- ☐ **General useful electronic components:** <http://highlowtech.org/?p=1300>
- ☐ **General guide on textiles and crafts blended with electronics:** <http://www.kobakant.at/DIY/>
- ☐ **Bulk coin cell batteries:** <http://www.digikey.com/product-detail/en/CR2032/P189-ND/31939>
- ☐ **Conductive fabric:** <https://www.sparkfun.com/products/10056>
- ☐ **Conductive double-sided adhesive:** <https://www.adafruit.com/products/1656>
- ☐ **Soldering iron:** <http://www.amazon.com/Weller-WLC100-40-Watt-Soldering-Station/dp/B000AS28UC/>
- ☐ **Lead-free solder:** <http://www.amazon.com/DMiotech%C2%AE-0-8mm-Rosin-Soldering-Solder/dp/B015DM18KU/>
- ☐ **General conductive materials:** www.lessemf.com
- ☐ **Velostat for making pressure sensors:** <https://www.adafruit.com/product/1361>

EDUCATOR PAPER ELECTRONICS RESOURCES:

- ☐ **21st Century Notebooking Google Group:** <https://plus.google.com/u/0/communities/106297899247135466221>
- ☐ **Nexmap Hack Your Notebook:** <http://www.nexmap.org/21c-notebooking-io>
- ☐ **Exploratorium Paper Circuits:** <http://tinkering.exploratorium.edu/paper-circuits>
- ☐ **Instructables Chibitronics tutorials:** <http://www.instructables.com/howto/chibitronics/>
- ☐ **Bling the Book: Circuits on Paper:** <http://blingthebook.blogspot.com/>
- ☐ **Paper Circuits Code resources:** <http://jeanninehuffman.weebly.com/paper-circuit-resources.html>
- ☐ **Sparkfun Paper Electronics guide:** <https://learn.sparkfun.com/tutorials/the-great-big-guide-to-paper-circuits>

RESEARCH PUBLICATIONS:

PhD dissertation: Paper Electronics: Circuits on Paper for Learning and Self-Expression

By Jie Qi https://dl.dropboxusercontent.com/u/29707586/Jie_dissertation.pdf

Paper Electronics with Circuit Stickers

By Jie Qi, Jennifer Dick and David Cole https://dl.dropboxusercontent.com/u/14193394/Paper_electronics_makeology_final_references.pdf

Sketching in Circuits: Designing and Building Electronics on Paper

By Jie Qi and Leah Buechley https://dl.dropboxusercontent.com/u/14193394/Circuit_sketchbook_Final_small.pdf

Electronic Popables: Exploring Paper-Based Computing through an Interactive Pop-up Book

By Jie Qi and Leah Buechley https://dl.dropboxusercontent.com/u/14193394/electronic_popup.pdf

Felted Paper Circuits Using Joomchi

By Nicholas A. Knouf <http://zeitkunst.org/sites/default/files/publications/Knouf2017a%20Felted%20Paper%20Circuits%20Using%20Joomchi.pdf>

BOOKS:

Art of Tinkering

by Karen Wilkinson and Mike Petrarch <https://www.amazon.com/Art-Tinkering-Karen-Wilkinson/dp/1616286091/>

Make: Paper Inventions: Machines that Move, Drawings that Light Up, and Wearables and Structures You Can Cut, Fold, and Roll Paperback

by Kathy Ceceri <https://www.amazon.com/Make-Inventions-Machines-Wearables-Structures/dp/1457187523/>

Big Book of Makerspace Projects: Inspiring Makers to Experiment, Create, and Learn

By Colleen Graves and Aaron Graves <https://www.amazon.com/Big-Book-Makerspace-Projects-Experiment/dp/1259644251/>

Makeology: Makerspaces as Learning Environments (Volume 1)

Edited by Kylie Peppler, Erica Halverson, Yasmin B. Kafai <https://www.amazon.com/Makeology-Makerspaces-Environments-Kylie-Peppler/dp/1138847771/>

OTHER RESOURCES? PLEASE ADD!

Makeology: Makers as Learners (Volume 2)

Edited by Kylie Peppler, Erica Rosenfeld Halverson, Yasmin B. Kafai <https://www.amazon.com/Makeology-Makers-as-Learners-2/dp/113884781X/>

Invent to Learn

By Sylvia Martinez and Gary Stager <https://www.amazon.com/Invent-Learn-Tinkering-Engineering-Classroom/dp/0989151107/>

Invent to Learn: Guide to Fun

By Josh Burkner and Sylvia Martinez <https://www.amazon.com/Invent-Learn-Guide-Fun/dp/0989151182/>

KINESTHETIC ART CONNECTIONS

Cindy Ingram, Art Class Curator, cindy@artclasscurator.com

Join my email list for [Your Weekly Art Break](#)—a weekly email including an artwork of the week, alerts to new content on Art Class Curator, and fun art finds from across the internet.

Why should you use your body to interpret art?

1. Aids in Art Interpretation
2. Teaches Art History
3. Facilitates Personal Connections
4. Connects with Art Processes and Artists
5. Gives Opportunities to Be Creative

More Kinesthetic Activities to Do with Art

1. Put yourself into the pose of the characters in the painting and discuss how it feels.
2. Make a *tableaux vivant* (a living picture).
3. Play charades.
4. Have a conversation about the artwork through only pantomime (only gestures with no words!).
5. Create a dance inspired by the artwork (this one is especially fun with abstract art!).
6. Trace the lines in an artwork with your finger in the air.
7. Get up and look at the artwork from far away, up close, down below, and from the side and notice how the artwork changes depending on where you look at it from.
8. Make the shapes in the artwork using your bodies, and work with others to make the shapes you can't.

9. Play mirror. Have one student have their back to the artwork and one student facing the art and the other student. Have the student who can see the artwork do movements from the art, and have the one with their back to the work mirror the moving student.

Related Resources on Art Class Curator

- [What do Kids Learn from Looking at Art?](#)
- [Looking at Art with Kids: Why and How?](#)
- [Artworks that Make You Move](#)
- [82 Questions to Ask About Art](#)
- [Online Training: How to Talk About Art with Kids](#)
- [Online Training: Inventive Activities to Interpret Art](#)

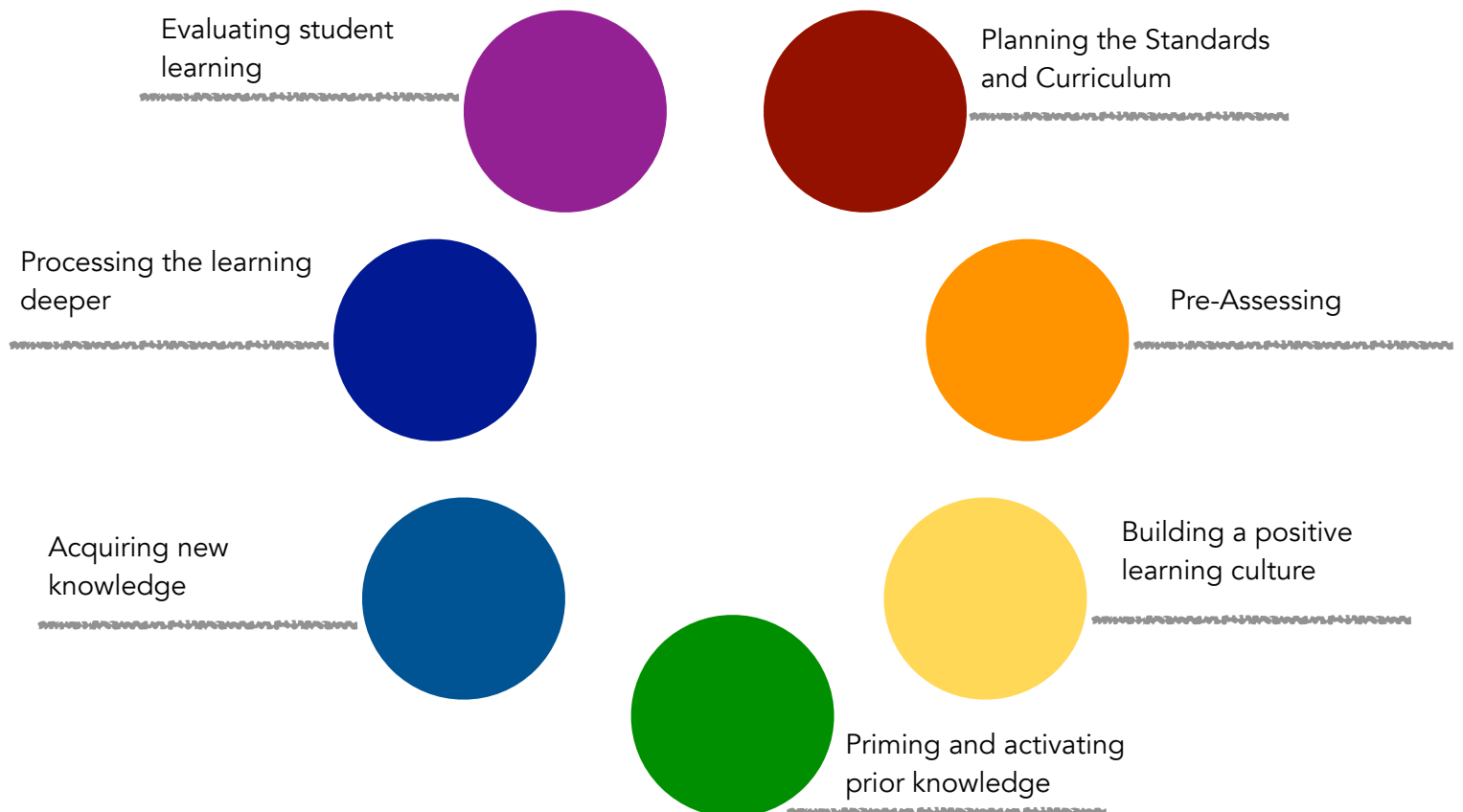
Use the discount code EDCLOSET to get 20% off your purchase of the online trainings listed above!

DEEPER LEARNING STEAM & ARTS INTEGRATION

Presenter: Alicia Morgan alicia@ammorgan.net

Question: Consider surface verses deeper learning. Can you think of examples where you have used both?

Cycle of Deeper Learning



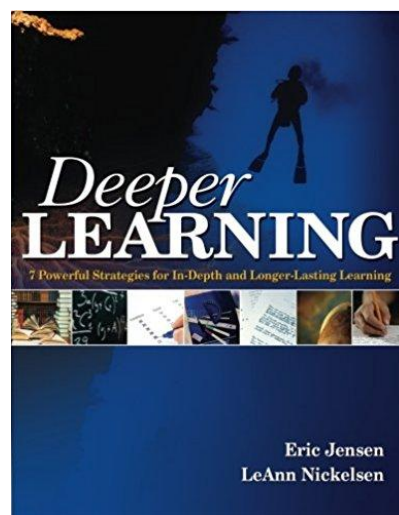
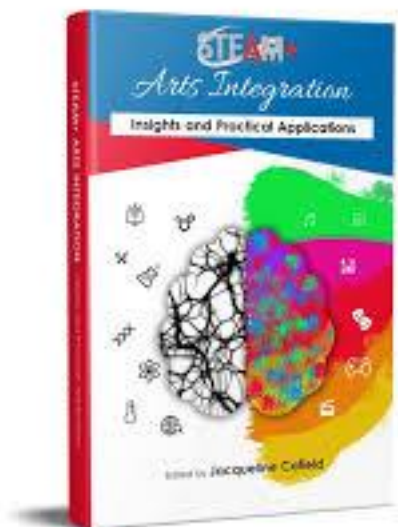
STEAM EDUCATION ACT

Introduced in House (07/20/2017)

STEM to STEAM Act of 2017

This bill amends the STEM Education Act of 2015 to include: (1) among the purposes for which the National Science Foundation shall award competitive, merit-reviewed grants the support of the integration of art and design in STEM (science, technology, engineering, and mathematics) educational programs; and (2) among activities supported by such grants the design and testing of programming that integrates art and design in STEM education in order to promote creativity and innovation.

RESOURCES



Art & Inquiry: Museum Teaching Strategies For Your Classroom

About this course: Explore how to integrate works of art into your classroom with inquiry-based teaching methods originally developed for in-gallery museum education.

Who is this class for: This course is designed for both classroom teachers and educators in informal settings. Its focus is on primary and secondary education, but in some cases the content can be adapted to the requirements of higher education. No prior knowledge of art history or museum-based teaching practice is required. Please note: If you want to complete the course and earn a Course Certificate by submitting assignments for a grade, you can pay the course fee. You can apply for financial aid if you can't afford the course fee. For any questions about the certificates, please consult the Coursera Learner Help Center.

Created by: The Museum of Modern Art

MoMA

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SOCIAL MEDIA

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FOR BOOKING

☎ 469-296-8349
✉ booking@ammorgan.net

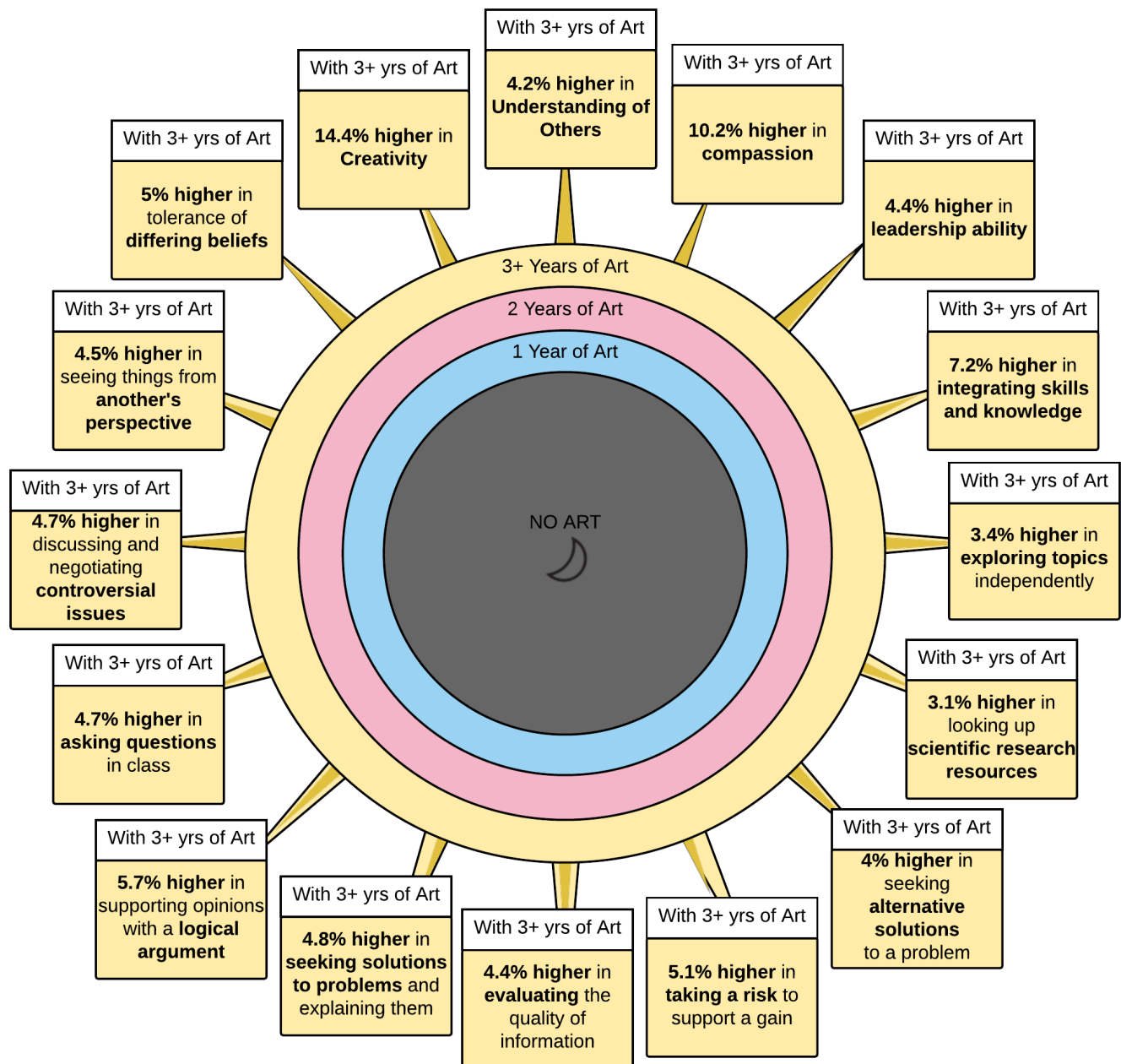
WWW.AMMORGAN.NET

ART = OPPORTUNITY

Presented by Merryl Goldberg, California State University San Marcos

goldberg@csusm.edu

Download the full powerpoint presentation here: <https://drive.google.com/open?id=13FXrQTxyuvR2P5xB17-3YolsSyFQklzm>



EXIT TICKETS: A CREATIVE WAY TO REINFORCE LITERACY IN A MAKERSPACE WORLD

Presented by: Julianne Ross-Kleinmann

Descriptive Writing

"The primary purpose of descriptive writing is to describe a person, place or thing in such a way that a picture is formed in the reader's mind."

http://www.readingrockets.org/strategies/descriptive_writing

Overall Task

Using the Engineering is Elementary [Technology Around Us](#) worksheet, describe in detail the technology you selected from the mystery bag.

Optional Warm-up Activity

Watch: Tony Montez, *What is Technology?*

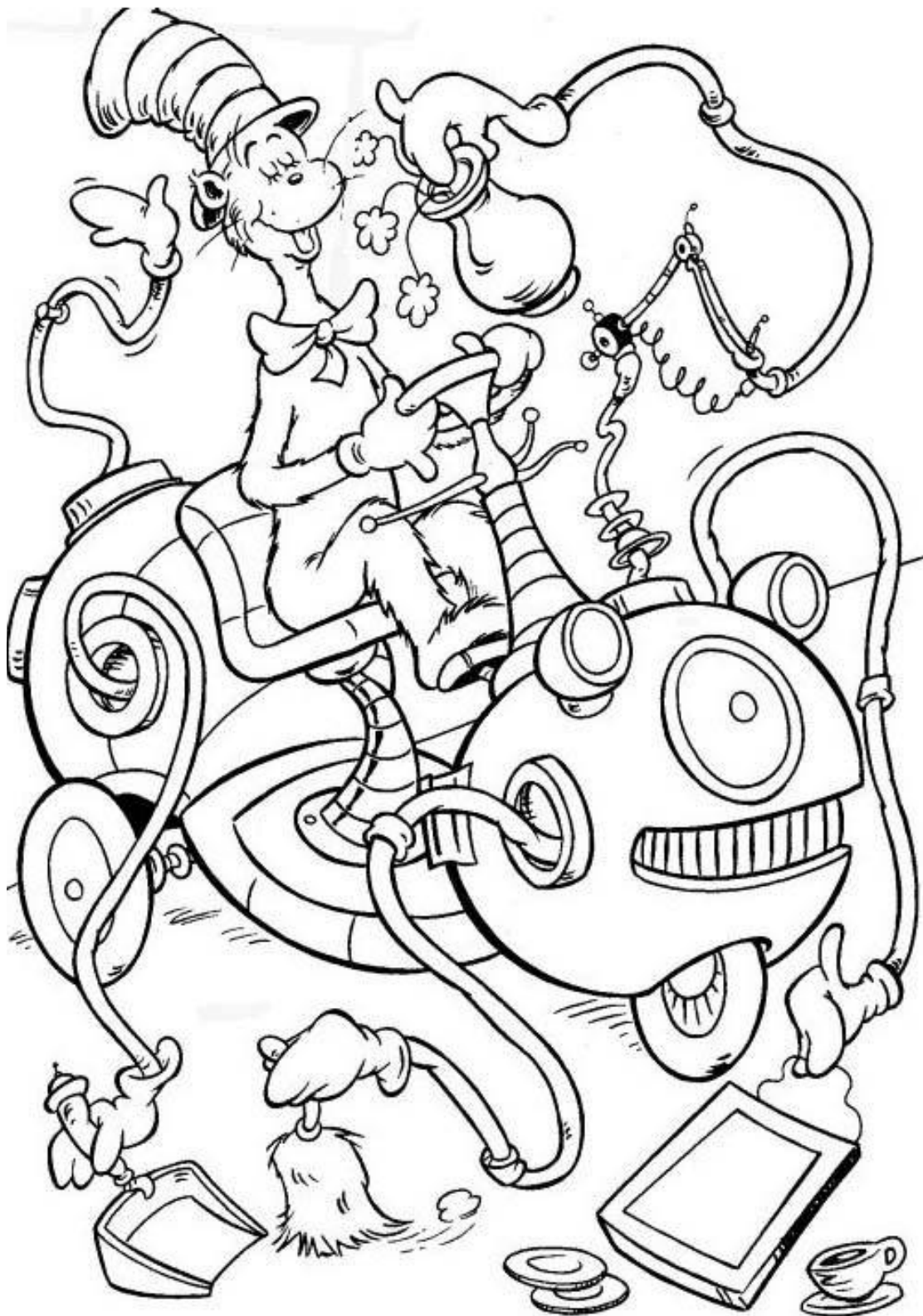
https://www.youtube.com/watch?v=Giiz81_uzK8

Optional Extension Activity

Color the Dr. Seuss page below. Describe the object the Cat in the Hat is riding.

OR...

Imagine making a new technology by combining your technology with someone else's. What new tool can you make? Describe what it does.

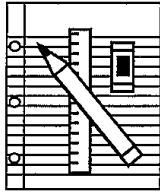


<http://www.educationalcoloringpages.com>

Name: _____ Date: _____

A

B



Technology Around Us

1. What is your object? _____

2. Draw a picture of your object in this box. Label the parts.

3. What does your object do? What problem does it solve?

4. What material or materials is your object made of?

Questioning - I Wonder...

"I wonder questions serve as a springboard to further *inquiry*."

Jill B. Van Hoff

Overall Task

Using Bill Atkinson's Photocard App, choose one of his amazing photos and click the  in the top right corner to learn where the photo was taken. Address a postcard to a friend telling them something you wonder about the photo or the location.

<http://www.billatkinson.com/aboutPhotoCard.html>

Optional Warm-up Activity

Watch: BrainPOP Jr. - Sending a Letter

<https://jr.brainpop.com/readingandwriting/communication/sendingaletter/>

Optional Extension Activity

Fly to the place your photo was taken to learn more.

What additional "I Wonder..." questions can you create

See sample postcards below.



Dear Karla.
While exploring with Google
Earth I landed on an
iceberg in Antarctica.
I wonder if thar are more
icebergs?
Love,
Ray.



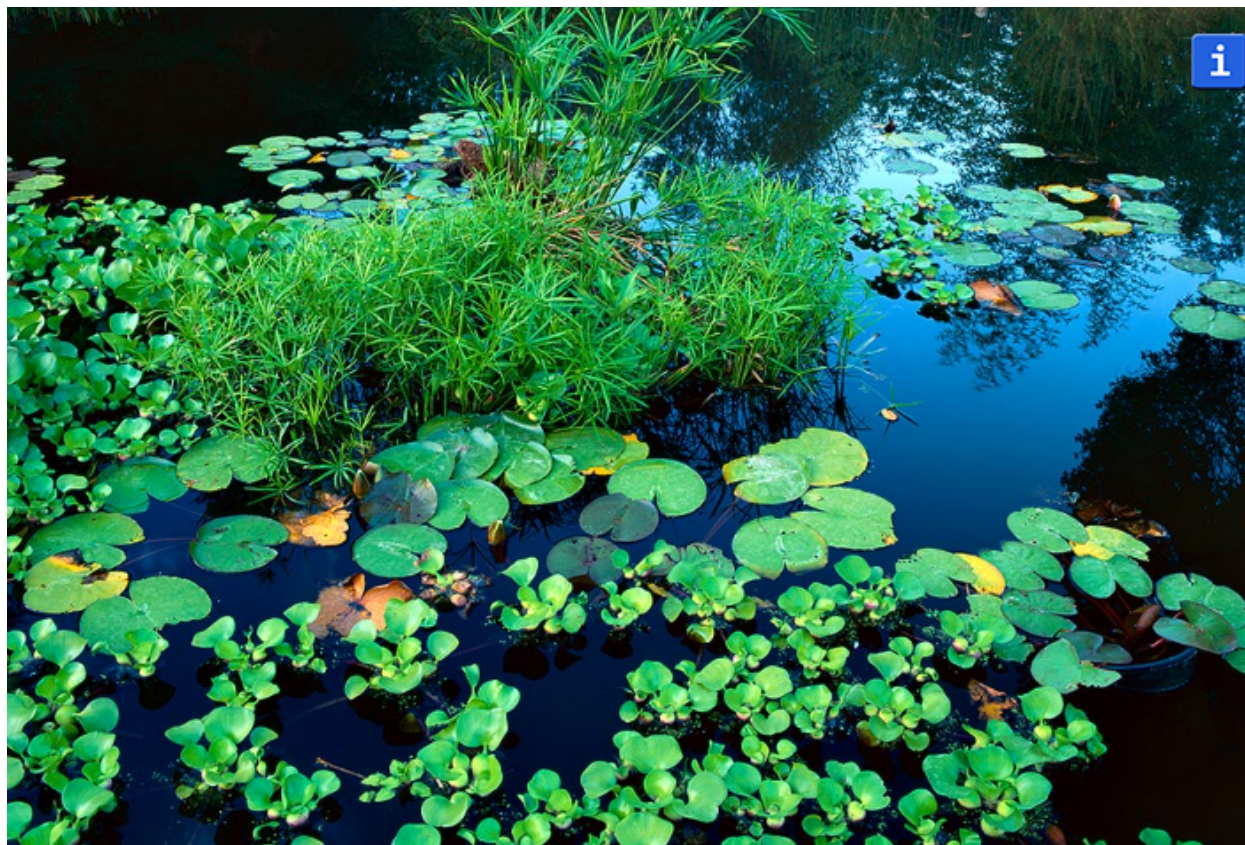
Sent by Foote on 4/10/14 using PhotoCard by Bill and Sioux Atkinson



The Foote School
50 Loomis Place
New Haven CT 06511-2223
United States



"Sculptured Iceberg" from Iceberg Graveyard, Pleneau Bay, Antarctica, photograph ©2007 Bill Atkinson



Dear Tina ,

*While exploring Google Earth I landed
In California and went to Michael 's Pond.*

I Wonder if frogs live there ?

love

Florence

Sent by Foote on 4/8/14 using PhotoCard by Bill and Sioux Atkinson



*The Foote School
050 Loomis place
New Haven CT 06511
United States*



"Michael's Pond" from Sebastopol, California, photograph ©1998 Bill Atkinson

Visualization - Sketch to Stretch...

"Allows students to monitor their own thinking and make connections between text and their own experiences."

<http://www.readwritethink.org/classroom-resources/lesson-plans/guided-comprehension-visualizing-using-229.html>

Overall Task

Create a group sketch representing the article you read.

1. As a group, choose [article one](#) or [article two](#) to either silently read to yourself or have someone in the group read it out loud.
2. As you listen or read, individually make symbolic or realist sketches of what you found interesting or important.
3. When everyone has completed their sketches, take turns sharing around the table, discussing similarities and differences.
4. Finally, create one group sketch that represents a summation of the group's ideas.

Optional Extension Activity

Use the Sketch-to Stretch strategy to strengthen vocabulary

<https://www.visualthesaurus.com/cm/booknook/sketch-to-stretch-visualizing-vocabulary/>



LOVING MATH AND NEEDING THE ARTS

Presented by: Cathy Seeley

Resources:

Faster Isn't Smarter: <https://drive.google.com/open?id=1X7WyzHGxM0hFq0k92zBRZrmuOdbAVNaV>

STEAM and Math: <https://drive.google.com/open?id=1-tmn98hpWTU-eJCMgvN3-S0mmaG4Di8O>

Smarter than We Think: <https://drive.google.com/open?id=1nZTPJukGRt7zplPdnZ-9Cn8l2lGfz9WI>

Classroom videos for discussion 2017:

<https://www.teachingchannel.org/blog/2016/05/13/modeling-with-math-nsf/> (second video on the page) A "Three-Act Lesson" for 2nd grade on subtraction (9:35; "What do you notice? What do you wonder?"); also kindergarten in first video (10:00)

<https://www.youtube.com/watch?v=Xl3-52B0V6s>

A "Math Effective Task" from Fairfax County Schools (VA): "This is your job . . ." (6th grade) working on a problem to find possible dimensions of a figure with a given perimeter (4:50)

<https://www.learner.org/resources/series32.html> (scroll down to #6)

From Annenberg Learner, a 4th-5th grade classroom working on a problem about the number of various types of animals in Yellowstone Park, as a follow-up to their trip to Yellowstone (21:16)

<https://www.teachingchannel.org/videos/fraction-multiplication-intro-sbac>

Fifth-grade lesson to get ready to multiply fractions, using an applied context (if not a likely situation) after a short number talk (9:13)

<https://www.teachingchannel.org/videos/ratios-and-proportions-lesson-sbac>

Sixth-grade lesson introducing ratios using a lesson on mixing purple paint (8:26).

<https://www.teachingchannel.org/videos/students-learn-from-mistakes-ccssmdc>

Middle school algebra students analyzing each other's mistakes on linear equations (2:50).

<http://mass.pbslearningmedia.org/resource/mtc13.pd.math.deb/encouraging-debate/>

A PBS Learning Media high school video produced by WGBH/WGBY in Massachusetts, on a pre-calculus lesson led by a math teacher/debate coach (4:54).

<https://www.youtube.com/watch?v=kNNMG7Wh9eU&feature=youtu.be>

A lesson on tire sizes from a 12th-grade course, Advanced Quantitative Reasoning (21:31).

(Also, check out the video of Marisa solving the bus problem from the Math Reasoning Inventory: **mathreasoninginventory.com**; select 'Learn More' and scroll to the middle for an example of what happens when we cover content quickly by teaching tricks and shortcuts without building understanding.)

Publicly posted videos selected by Cathy Seeley, not necessarily as exemplars, but as a foundation for discussion (2017)

WE ARE ALL MAKERS!

Presented by: Jennifer Garcia

Create your own STEAM Fest

Here is our entire **t**ried, **t**ested and **t**weaked STEAM Fest preparation package of templates and examples...

<https://goo.gl/dT9gXZ>

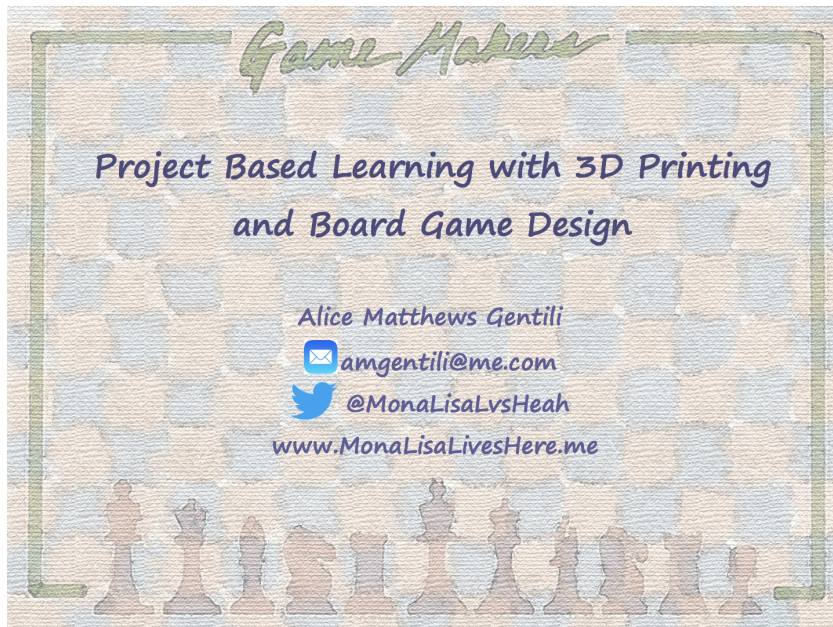


View Today's Powerpoint

<https://drive.google.com/open?id=1GR7pFHfYmr7dxGFwk08zi73lCMZXFRmOaZ23wWKjzEw>

GAMEMAKERS PROJECT BASED LEARNING SUPPORTING DOCUMENT

Presented by: Alice Matthews Gentili



Game Makers

Slideshow: <https://goo.gl/VFD4QF>

I recommend the Download of this file. With Google Slides, videos may not be available



A Video Overview of some of the GameMakers Games: <https://goo.gl/3xY4Yq>

3D Design App – Morphi Edu: <https://itunes.apple.com/us/app/morphi-edu/id1003747185?mt=8>

3D Model Repository – Thingiverse: <https://www.thingiverse.com/>

FOLLOWING DIRECTIONS WITH KANDINSKY

Presented by: Amanda Koonlaba

Speaking and Listening Look-Fors

- Student listens as the teacher speaks.
- Student listens as other students speak.
- Student thinks before responding.
- Student follows oral directions.

Visual Art Look-Fors

- Student discusses the work of Kandinsky.
- Student listens to others discuss the work of Kandinsky.
- Student uses art vocabulary such as color, line, and shape,
- Student manipulates art materials such as glue, pencils, and scissors.

Following Directions with Kandinsky

(c) 2017 Party in the Art Room

Informal Assessment

Speaking and Listening Look-Fors		
	Check if observed	Notes
Student listens as the teacher speaks.		
Student listens as other students speak.		
Student thinks before responding.		
Student follows oral directions.		
Visual Art Look-Fors		
	Check if observed	Notes
Student discusses the work of Kandinsky.		
Student listens to others discuss the work of Kandinsky.		
Student uses art vocabulary such as color, line, and shape,		
Student manipulates art materials such as glue, pencils, and scissors.		

The background is a dark, textured surface with various abstract shapes and colors. There are large, irregular shapes in shades of green, blue, and red. Some shapes have internal patterns, like a yellow circle with a black outline. There are also smaller, more defined shapes like a pink star and several red circles. The overall style is reminiscent of Wassily Kandinsky's abstract art.

Following Directions with Kandinsky

Party in the Art Room

© 2017 Amanda Koonlaba

Following Directions with Kandinsky

Common Core: Language, Speaking and Listening

L.02.04, L.03.03a, L.04.04.a, L.05.04.a- Context

SL.02.01.b, SL.03.01.d, SL.04.01.d, SL.05.01.d- Participating in conversations

National Core Art Standards:

Anchor Standard 2: Organize and develop artistic ideas and work.

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I Can Statements--- Learning Targets :

I can listen, think, and do.

I can use a pencil, markers, scissors, and glue properly.

I can discuss artwork.

Highly Effective Questions:

Why do we think after we listen?

How do I use a pencil, markers, scissors, and glue properly?

How can I discuss artwork?

Essential Vocabulary:

theme

positional words (above, below, etc.)

Set/Hook:

TSW view [Wassily Kandinsky's work with shapes.](#)

TSW will discuss the details of the artwork with partners. TSW identify possible themes.

Whole Group:

Guided Practice (Modeling)

TTW read the steps (at least three times each).

TSW listen, think, do.

Independent Practice:

TSW trace their shapes with a black permanent marker.

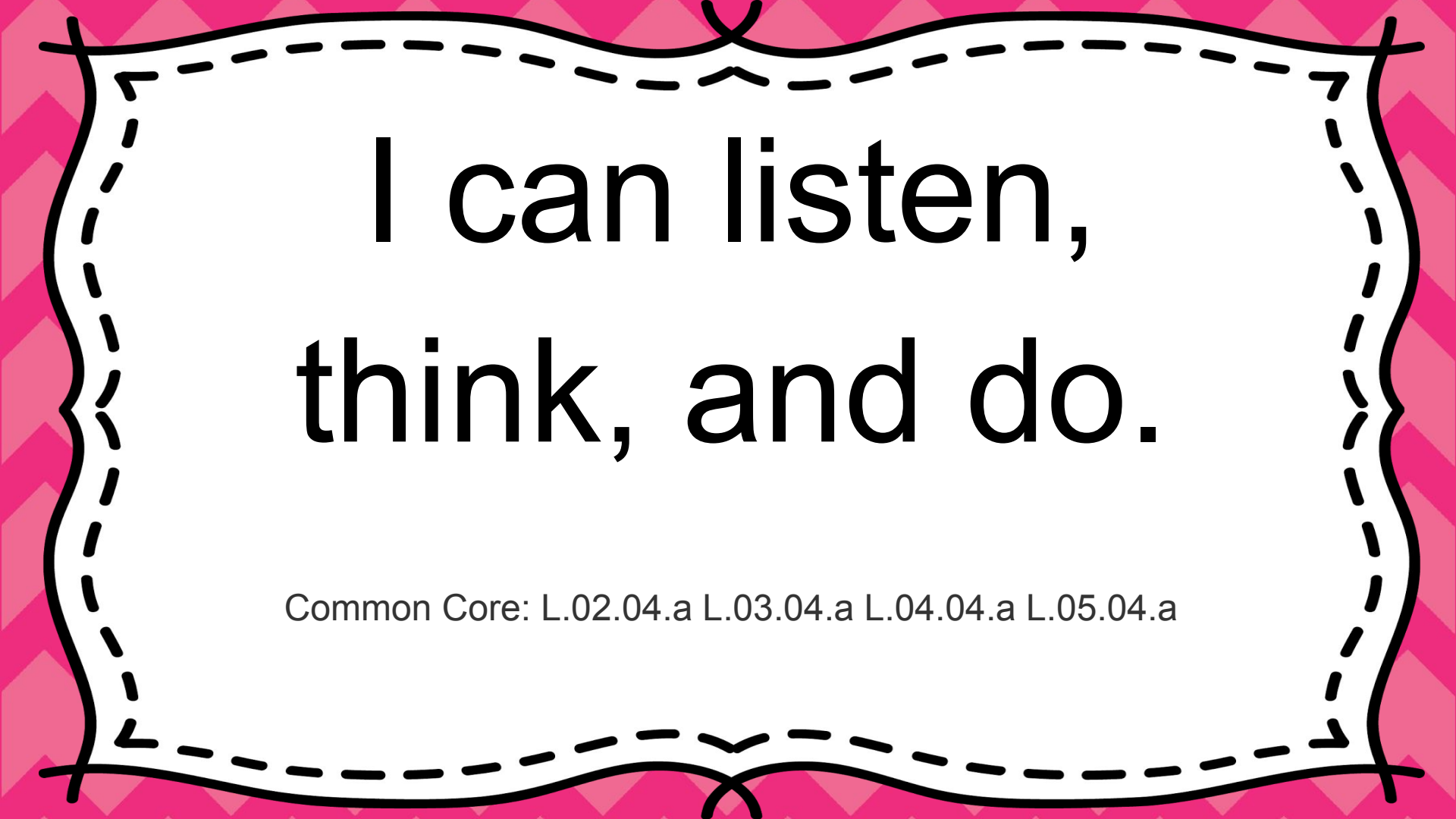
TSW color their shapes with crayons. TSW be sure not to color the background. TSW use black liquid watercolor paint to create a wash for the background.

Small Group:

TTW pull small groups of students as needed to repeat the directions.

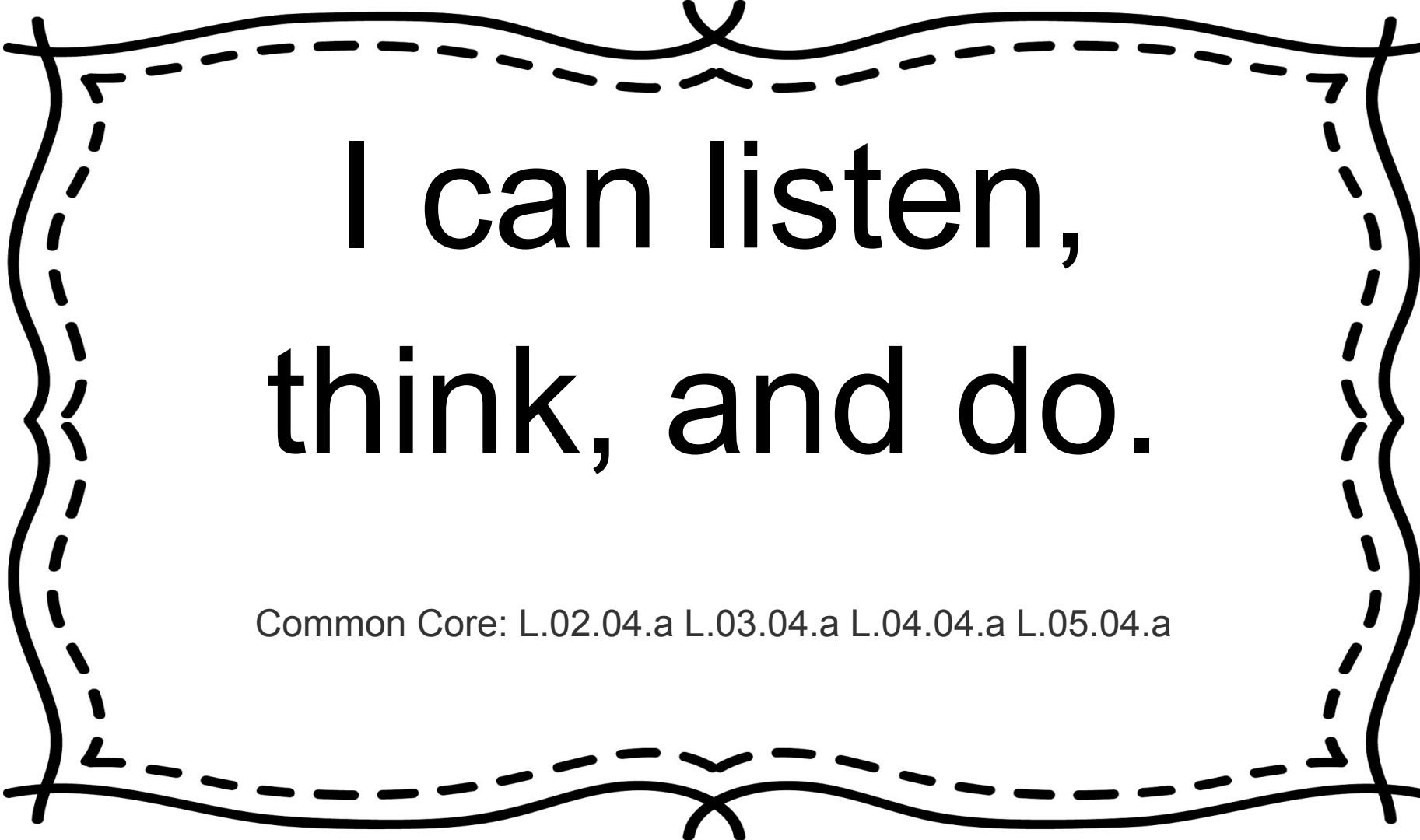
Closure:

TTW give an oral direction using positional words. TSW follow. (Example: Put your left hand above your head.)



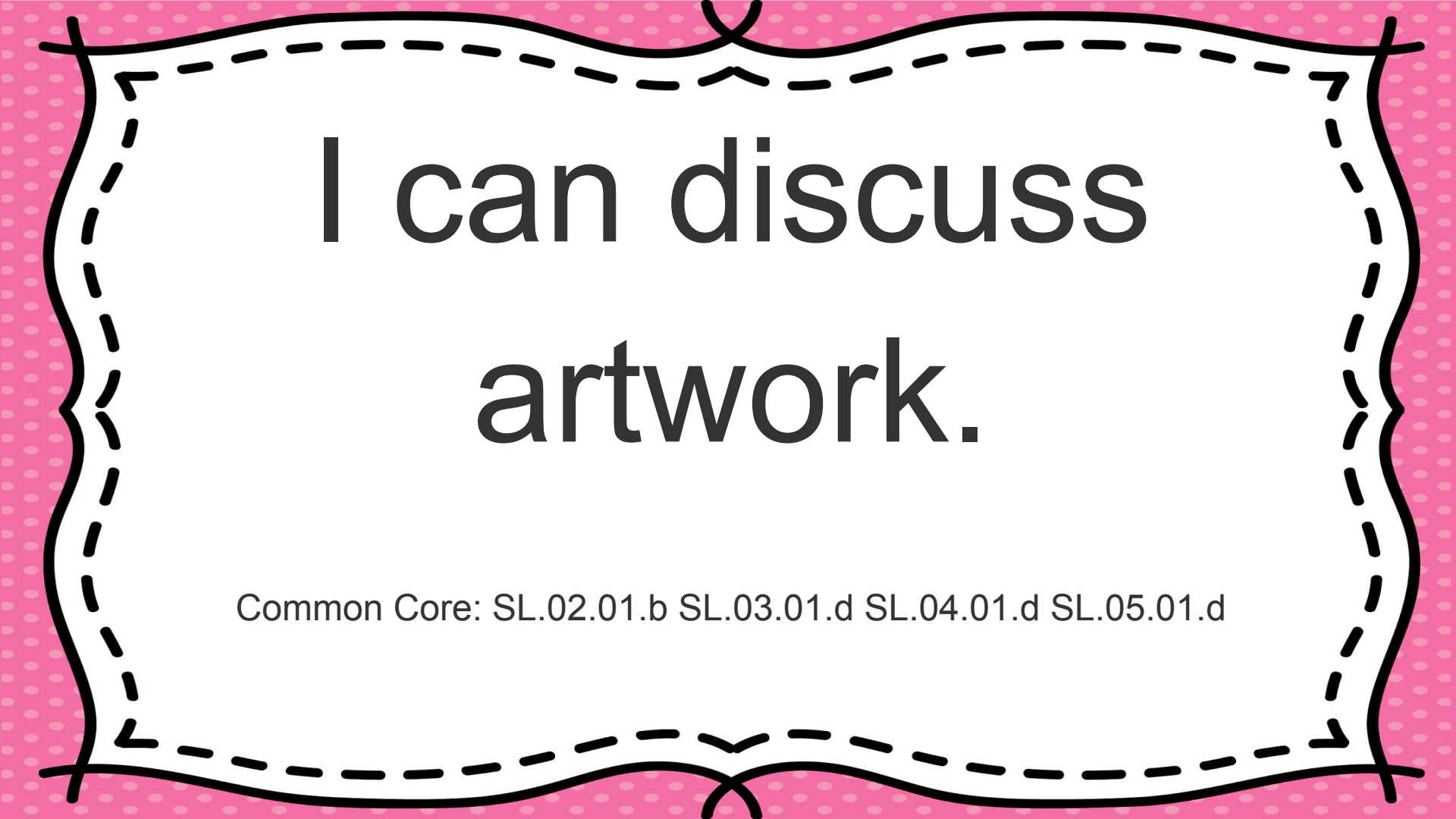
I can listen,
think, and do.

Common Core: L.02.04.a L.03.04.a L.04.04.a L.05.04.a



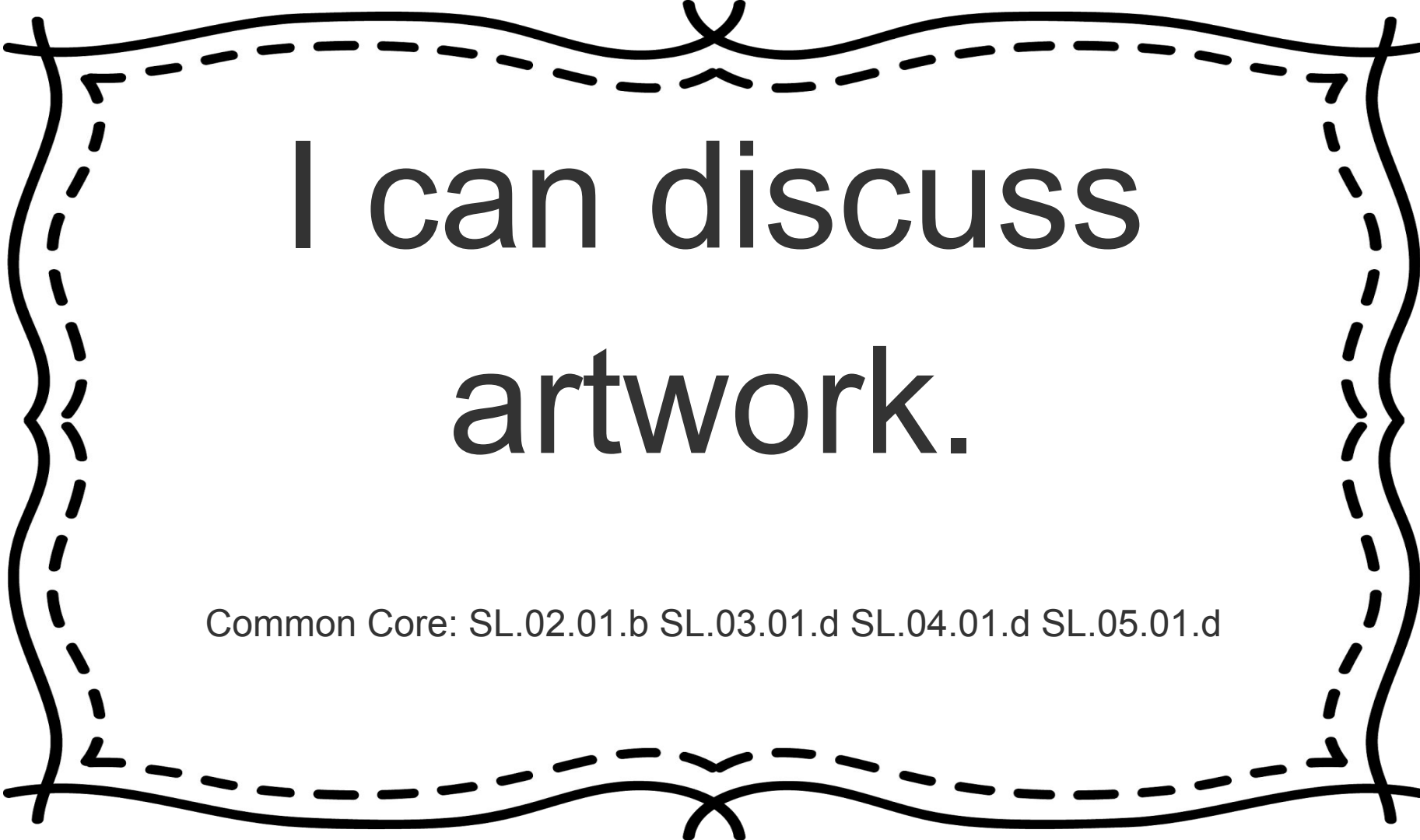
I can listen,
think, and do.

Common Core: L.02.04.a L.03.04.a L.04.04.a L.05.04.a



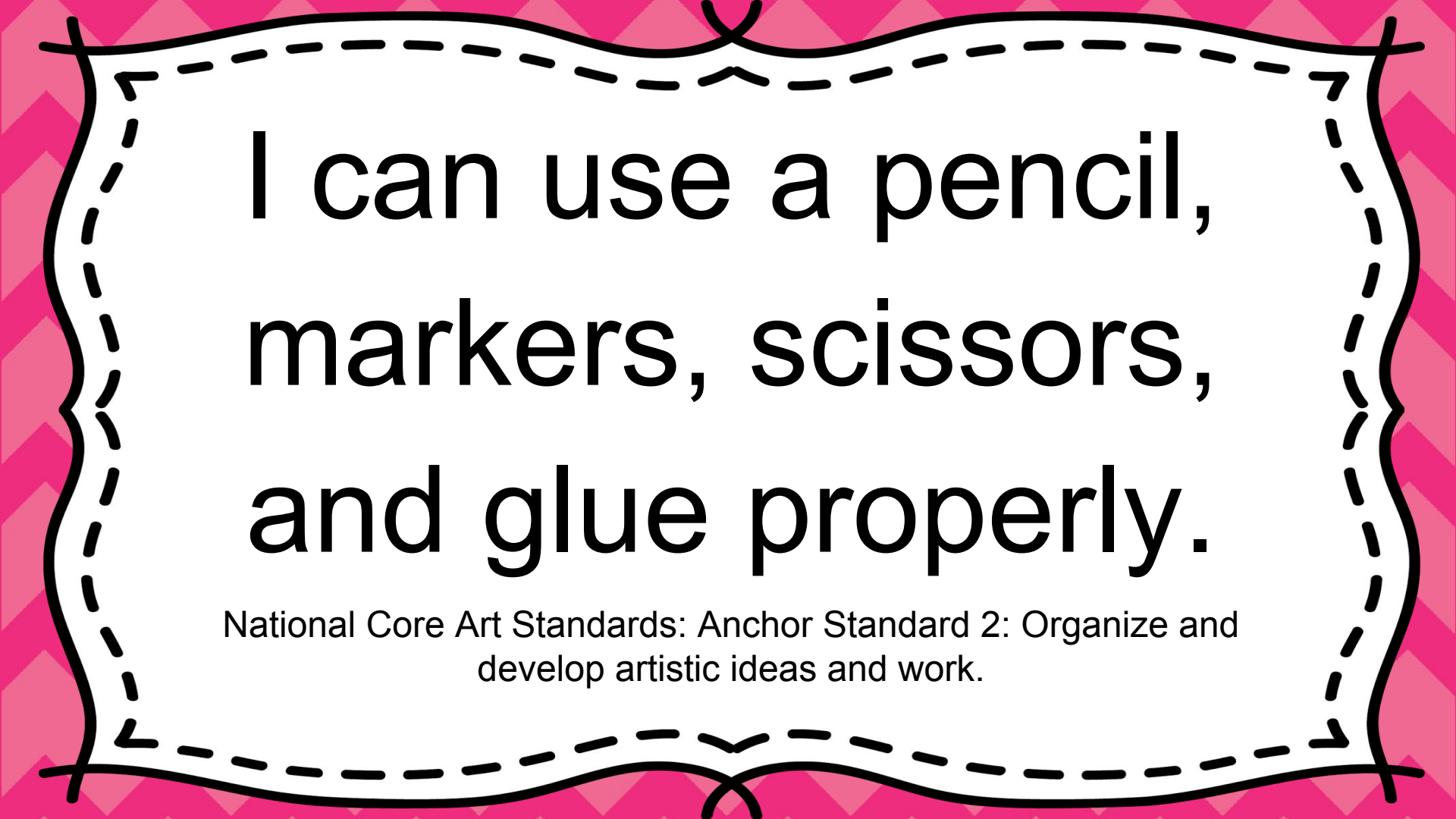
I can discuss
artwork.

Common Core: SL.02.01.b SL.03.01.d SL.04.01.d SL.05.01.d



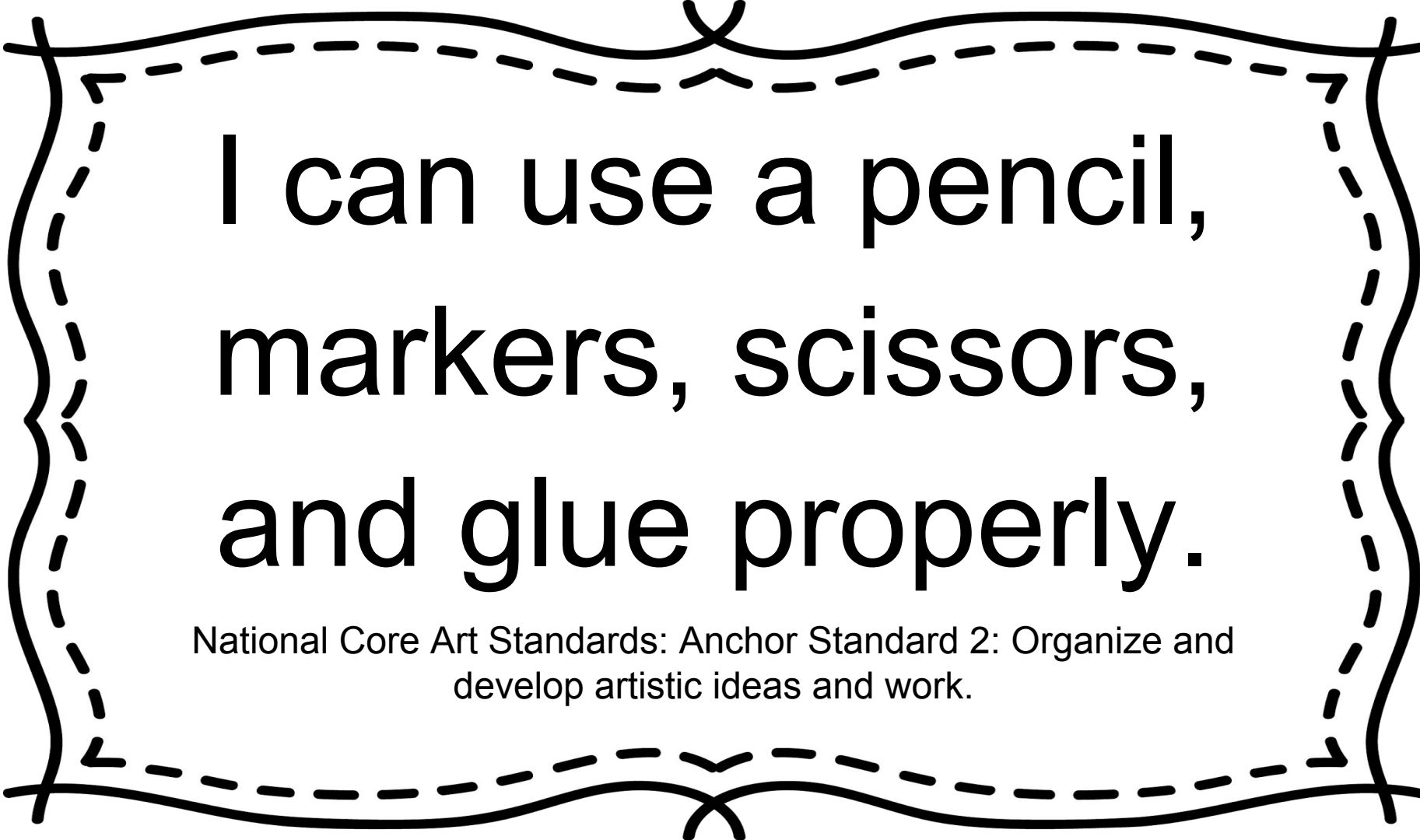
I can discuss
artwork.

Common Core: SL.02.01.b SL.03.01.d SL.04.01.d SL.05.01.d



I can use a pencil,
markers, scissors,
and glue properly.

National Core Art Standards: Anchor Standard 2: Organize and
develop artistic ideas and work.



I can use a pencil,
markers, scissors,
and glue properly.

National Core Art Standards: Anchor Standard 2: Organize and
develop artistic ideas and work.

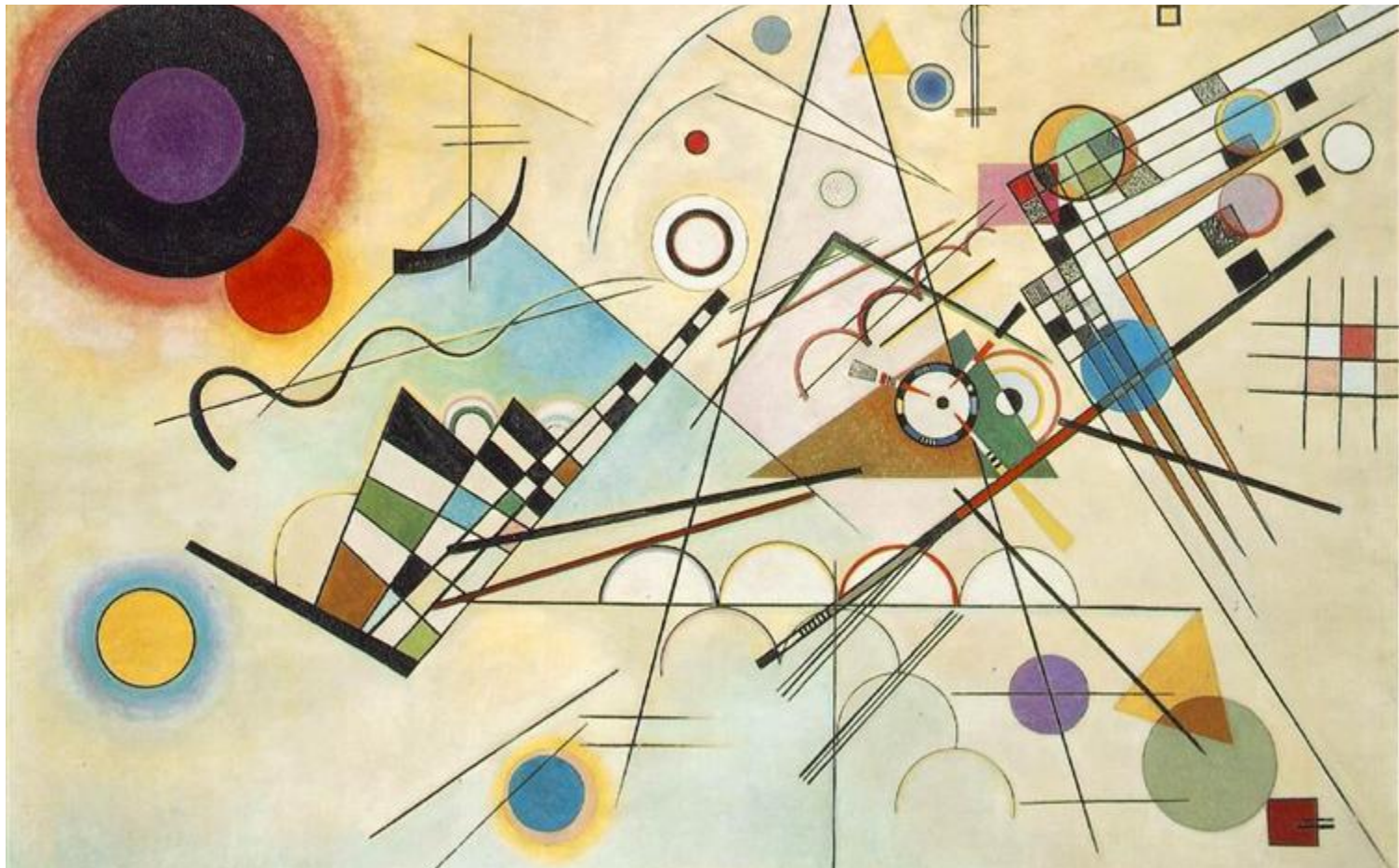
Analyzing a Kandinsky

Students need to view Kandinsky's work before they begin the following directions activity or start their own art-making process. Analyzing this work is part of what makes this lesson arts-integrated and highly effective.

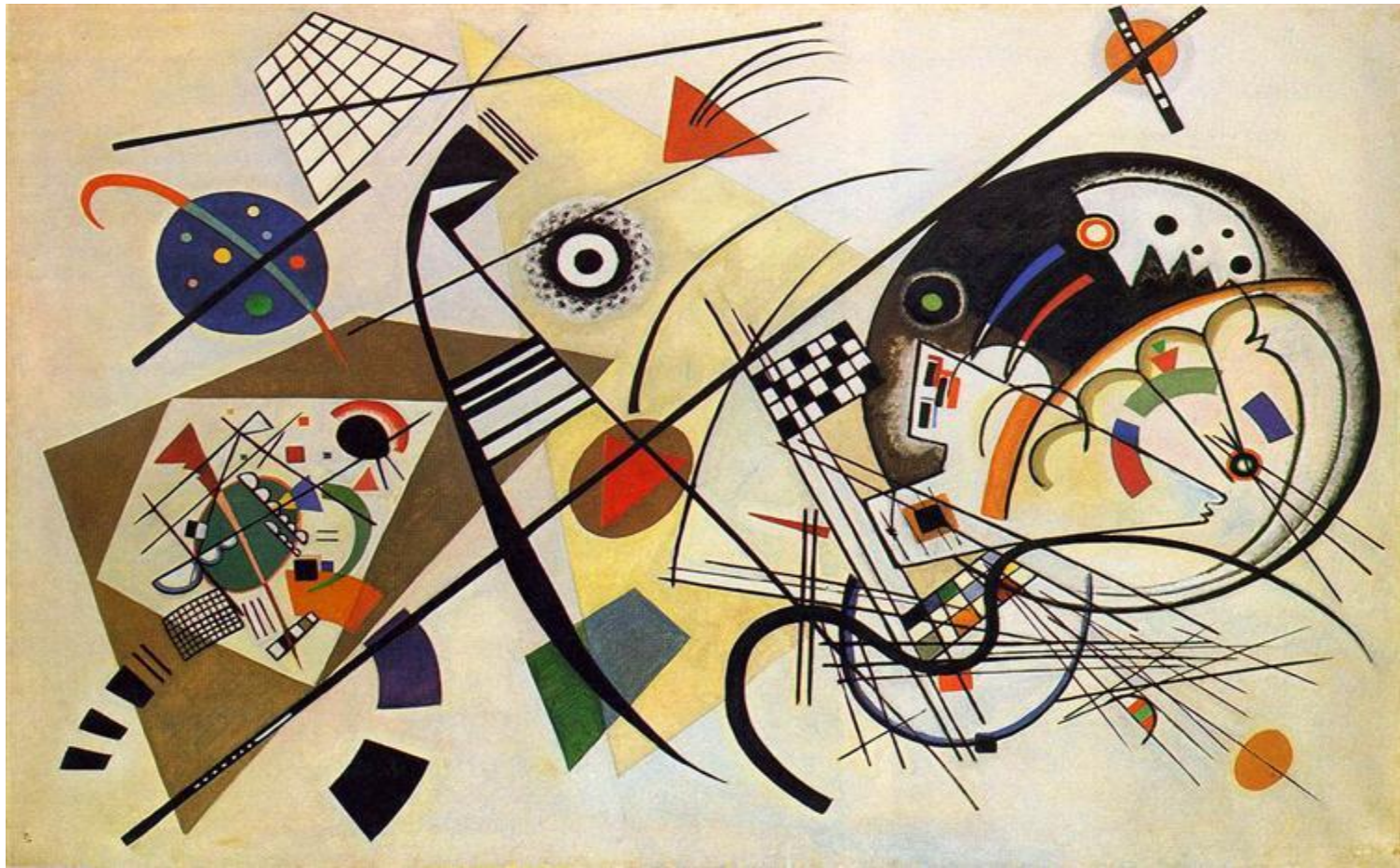
Here's how to lead an analysis of Kandinsky's works:

First, model for the students how your thought process would look as you analyze his work. For instance, you could show the students Kandinsky's [*Composition VIII*](#). Explain how it has some circles in the upper left corner that resemble an eclipse. Then, point out the circle near the center that has three triangles touching it. This resembles a clock. You could point out all of the different shapes and colors you see. Point out the difference between the lines and shapes. Tell the students that this work makes you think about time because of the part that looks like a clock and the part that looks like an eclipse.

Next, ask the students to view [*Transverse Line*](#). Tell them to view the work silently for at least thirty seconds. Then, let them explain to their groups/neighbors/partners what details they notice. They should also explain what they think the overall theme could be. Encourage them to use art vocabulary like: color, line, shape. A graphic organizer is provided for recording if needed.



Composition VIII by Wassily Kandinsky
Public Domain



Transverse Line by Wassily Kandinsky
Public Domain

Title of Kandinsky's Work: _____

Detail 1

Detail 2

Detail 3

Detail 4

Detail 5

Detail 6

Detail 7

Detail 8

Possible Themes:

Title of Kandinsky's Work: _____

Detail 1

Detail 2

Detail 3

Detail 4

Detail 5

Detail 6

Detail 7

Detail 8

Possible Themes:

Steps to be read aloud:

1. Draw a large circle in the bottom left corner of the paper. The circle should be about the same size as your hand. This will be the largest shape that you draw on your paper.
2. Draw two smaller circles inside the circle you just drew.
3. Draw three medium-sized circles anywhere on the paper. These circles should be smaller than the very first circle you drew. They should not be near each other.
4. Draw two smaller circles inside each of your medium-sized circles.
5. Draw two squares that are about the same size anywhere on the paper. Make sure the squares are drawn near each other, but do not let them touch.
6. Draw a rectangle below one of the circles. The top of the rectangle should touch the bottom of the circle.
7. Now, draw a triangle above a different circle. Make sure the bottom of the triangle touches the top of the circle.
8. Draw stripes inside the squares.
9. Draw five stars anywhere on your paper.
10. Look back at Kandinsky's *Transverse Line*. Find four things about that work that inspire you. Use those to add four more things to your own work.

Notes:

Decision-making is an important skill. Students need practice with this. Here are some ways that this lesson encourages this, plus some tips and tricks.

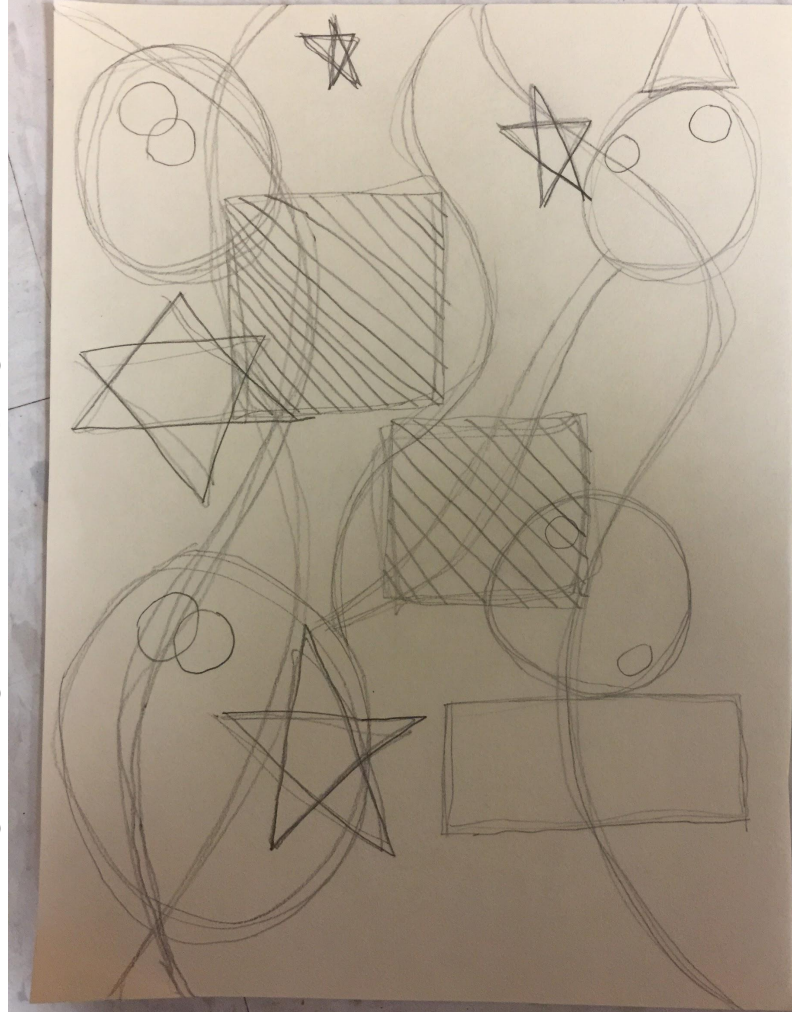
1. The oral instructions are designed to give enough direction that each student will have to listen, think, and do. Each student should have some basic components in their work (ex.: circle in the bottom left corner). However, the directions are also designed to allow them to think about what they heard and make a decision. For instance, they are told to draw stripes inside their squares. They are not told whether the stripe should be straight, zig zag, horizontal, diagonal, or vertical. This is their decision to make. They will try to ask a thousand questions. Do not tell them anything except what the directions say. They need to make their own decision based on their interpretation of the information they hear.
2. Don't allow the students to erase. Students become dependent on erasers and don't try to otherwise problem-solve when they make mistakes. In addition, they will erase the same line multiple times, which leaves ghost-lines that are visual distractions from the artwork. Erasing is a hard habit to break. So, be encouraging. This builds trust as well. It forces the students to both figure out how to work with their mistakes (make them a part of the artwork) and to trust themselves. If they know they cannot erase, they are more likely to think before they draw.

Helpful Hints for Creating the Artwork

1. One way to get interesting lines is to have the students trace their pencil lines with a black permanent marker two or three times. The lines will be bolder and have an interesting repetitive quality about them.
2. Another way students can make their artwork more interesting is to color the shapes lightly and then add patterns inside the shapes with the same color crayon. They can press just a bit harder or use their crayon more like a pencil to get a darker color. The intensity changes and the pattern will show up. Circles, stripes, and polka dots make great patterns for this technique.
3. Creating a wash with black paint over crayon is a great way to make the colors pop. Thicker paper is best for this. Any kind of paint can be used if it is watered down. However, liquid watercolor paint works best. If liquid watercolor is used, sprinkle some salt on it while it is wet and let it dry. This causes the paint to move on the paper and gives it an implied texture.



Left: 2nd grader's work in progress
Right: 5th grader's work in progress





Thank you so much for purchasing this arts-integrated lesson from [Party in the Art Room](#). This product was purchased for a single user. If you'd like to obtain a multi-user license, please return to TpT and purchase one.

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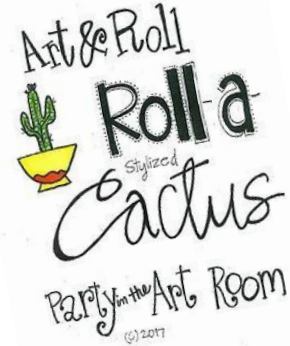
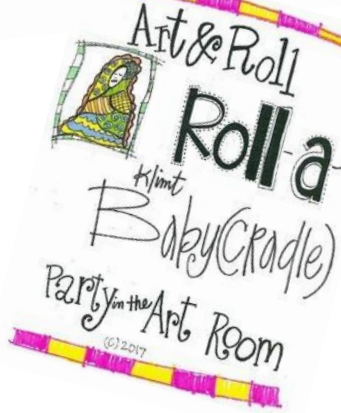
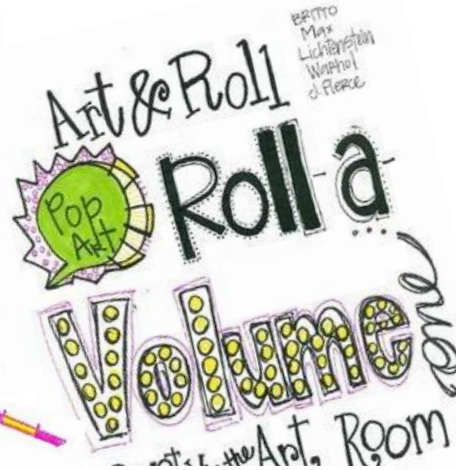
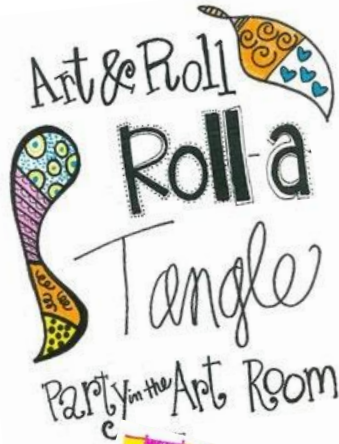


Check out the blog

Party in the Art Room

for more arts-integrated lessons, ideas, and resources
from Amanda Koonlaba.

You might also like



Party in the
ART ROOM
with Amanda Koonlaba



Thank you, thank you very much!

[Click here for special pricing for attendees of my conference session on Following Directions with Kandinsky](#)



Arts Integration Lessons: Featuring the Work of Wassily Kandinsky

Teach math and writing with art!

This ebook is designed for elementary teachers who are looking for ways to use arts integration to engage and empower students.

Throughout this book, you'll discover ways to integrate the work of master artist Wassily Kandinsky, specifically the famous *Concentric Circles*, to teach math and writing.

Arts Integration and STEAM are revolutionizing education. The work of the author, Amanda Koonlaba, has been featured by PBS, ASCD, EducationWeek, Education Closet, and more. She is an award-winning educator with over 12 years experience in the classroom. The content of this book stems from her extensive research and experience with arts integration and STEAM.

Focus Skills included in this resource:

- Operations and Algebraic Thinking
- Measurement and Data
- Writing

The lessons are easily adapted to any grade level and tips on how to do that are included in the material.

Included in this ebook are chapters on:

- Analyzing Kandinsky's Work
- Create Your Own Version
- Carrying Out the Lessons
- Additional Tips and Tricks
- Other Project Ideas
- Final Words and Additional Resources

This ebook is in full color with photos of the lessons to help guide teachers through implementation. Here is a resource with exactly what you need to teach these arts integration lessons with confidence and ease.

Don't Delay: Discount ends March 3, 2018

LISTEN TO LEARN

Presented by: Elizabeth Peterson, CAGS Arts, Leadership and Learning

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elizabeth@theinspiredclassroom.com

Twitter: @eliza_peterson

Facebook: [facebook.com/theinspiredclassroom](https://www.facebook.com/theinspiredclassroom)

FULL PRESENTATION DOWNLOAD: <https://drive.google.com/open?id=1ozH7PnLLzGL93Z2TsA4sCznGOA4XxyLrG-IgKnulPsM>

Passive Listening

- In the background
- "In one ear and out the other"
- Soundtracking Your Classroom
- Becoming Self-Aware to be able to Self-Manage

Active Listening

- Engage your ears and your brain!
- Listen for musical themes, volume/tempo changes, instrumentation and details in the music
- Inspires stories, poetry, visual artwork, dance/movement creation, learning about emotions
- Integrates well with writing, math and history.

SCIENCE AND DANCE: FINDING WHAT WORKS

Presented by: Deirdre Moore

BEST: Body, Energy, Space and Time

BODY (Parts and Movements):

axial/non-locomotor (in self/personal space)

bend, twist, stretch, melt, spin, etc.

locomotor (through general space)

jump, gallop, leap, crawl, roll, etc.

ENERGY/FORCE (Quality of Movement)

How movement looks and feels:

heavy or strong (elephant walking) vs. light (feather floating)

smooth (spaghetti wiggling) vs. sharp (knife cutting, robot walking)

tight/bound (rope knotting) vs. loose/free (water flowing)

SPACE (Personal and General):

level	size	shape	direction	pathway	relationship
low	small	flat	forward	straight	shadow
middle	medium	wide	backward	curvy	mirror
high	big	narrow	up	zig-zag	connected
		twisted	down	spiral	unison

TIME:

speed or tempo - fast, medium, slow, freeze, suspended

relationship – before, after, next, etc.

rhythm – beat, rhythm pattern, accent

Rapid Earth Changes – Dance Notes

Student Name: _____

Group (A, B, C or D): _____

Rapid Earth Change (tsunami, volcano, etc.): _____

Body Movement: Is the movement axial or locomotor? What type of movement could the body do to simulate the movement observed in the video? (shaking, spinning, jumping, etc.)

Energy: How is the object moving? What smooth energy, sharp energy, vibrating energy, strong energy, light energy, free energy, bound energy, etc.

Space: How does the object use the elements of space? What levels, size, shapes, direction, pathway, relationship to other things?

Time: Are the movements fast, moderate or slow? Does the movement happen at a steady or changing tempo? Which movements happen first? Next? Do the movements occur with regularity or sporadically?

As you watch the video of the rapid earth change think about the elements of dance (BEST). Identify the objects involved and describe how they move using the descriptions of BEST above to guide you. Note anything that you think will help you as you choreograph your dance.

Name of Object	Body Movement	Energy	Space	Time

Earth's Rapid Changes: Dance Outline

Name of Rapid Change: (landslide, earthquake, etc.)

Group Letter (A, B, C, or D) _____

Names of Dancers in Group:

Beginning: What causes the rapid change?	Middle: What happens during the rapid change?	End: What is the effect of the rapid change?

TEACHING TIPS AND POSSIBLE PITFALLS

- **Cover Content First:** Before trying to integrate dance and science, be sure the students have the dance skills they will need and an understanding of the science concepts. Both the dance skills and concepts and the science understanding will be deepened through the integration process but the students should have some knowledge of both first. Sometimes you may want to use dance to teach a science concept. That is a great use of dance as a teaching tool and it can be very effective. However, that would be considered enhancement. The focus for this presentation is integration.
- **Provide Movement Models:** Movement begets movement! I have written often about this because I really believe it is key for a richer integration experience. Be sure the students have models of movement. They should be exposed to professional dancers and be given time to really analyze and even imitate the movement. Dance videos allow for repeated viewings. Students should also see the science movement. Before creating a dance about the circulatory system, my students viewed a video demonstrating that system. They needed to see how the valves coordinate when they open and close and in which direction, where and how the blood flows, etc. Before creating a dance about volcanoes, the students watched actual footage of volcanic eruptions in order to inform the choreography they created to be as scientifically accurate as possible. When choreographing dances about the movement of molecules in different states of matter, I showed the students a balloon filling up as the baking soda and vinegar produced carbon dioxide so they could better

represent the movement of gas molecules.

- **Keep the Process Active:** As every teacher knows, the goal is to keep all students engaged at all times. The best way to do this during a dance integrated lesson is to be sure as many students are moving as possible at all times or are engaged in the learning and choreographic process at all times. The first time I tried to integrate dance and the circulatory system there was too much waiting. I did too much whole group discussion in getting ideas for movement rather than breaking them into groups and letting them experiment. I also had different students working on different parts of the system. I learned from that experience. Instead of having just one group of students creating choreography for the valves of the heart, for example, have all the students break into small groups and create choreography for that. When all parts of the circulatory system have been choreographed and the movements that best convey the science concepts have been determined by the class considering the unity and variety of the different parts of the final piece, allow students to self-select or assign students to different aspects. This will entail some wait time but ultimately will maximize not only active participation but greater understanding of the science for all students.
- **Be Balanced:** This can be tricky. You don't want the art to overtake the science nor do you want the science to overtake the art. Being sure to use terminology for science and art as you go through the process will help. Have related vocabulary posted for reference. Posting the terms will help you and the students remember to use the art and science language. Constantly refer back to BEST, having the students articulate how the science can be represented with body movement, energy, use of

space and time When choreographing, the science concept should be represented as accurately as possible but it should also be interesting to watch as dance. If students are creating and performing choreography, they need to consider what makes good choreography and performance.

The models of professional dancers will help with that. Armed with knowledge of both the dance and the science the students can make conscious choices to sacrifice scientific accuracy for artistic purposes.

They should be aware that as people we cannot always represent the science perfectly as it occurs in nature, we have limitations, but they should be knowledgeable enough to know where they are making those artistic choices or accepting our human physical limitations. This can inspire great creativity! Those conscious choices and explaining or defending those choices are part of what makes the process so rich and deepens the understanding of both the science and the dance.

- **Break It Down:** Before you start the integration process be really clear how you expect students to demonstrate the objectives and how you will break that down into its component parts. More than once I have made the mistake of giving an assignment thinking I had broken it down so clearly and then setting the students loose only to find that students got lost in the process, got frustrated and finished the assignment at wildly different times. Students will always have their own pace but when you have a class full of students, guiding pacing is important! Learning from that experience, when I had fourth graders creating choreography to show rapid earth changes, I first broke down the process into a beginning, middle and end format included in the handouts. Next, I had them think about how to frame the choreography and start brainstorming movements. After that, I introduced the music so they understood what

the tempo and counts would be. Finally, I had them start to create the choreography for each section. I would say, "You have x number of minutes to choreograph section one." I would play the music so they could coordinate the movement with the music as they went through the choreographic process. When they reached the end of the time, I would stop everyone, have them get into their starting positions, play the music and count them in so they all started at the same time. I would give them time (about a minute) to discuss how it went and then play the music again so they could start to finalize that section. I would repeat the process of groups discussing and dancing it again with the music. Once the groups could all consistently perform that section of choreography I would repeat that whole process again with the next section until all 3 sections had been choreographed. I also videotaped the process so they could refer to the video if they needed a reminder in subsequent weeks.

- **Know the Content:** Just as the students need to know the dance and the science in order to create successfully integrated movement pieces, so must the teachers. In a perfect world, both the dance teacher and the science teacher would be present for the actual integration process. However, if that is not possible each teacher should have a sense of the other content to best facilitate the learning process. Before I presented an integrated lesson as the dance teaching artist, even though the classroom teacher was present, I spent LOTS of time researching the science concepts and even performing science experiments at home that the students were doing in school. I wanted to have a deeper understanding of the content than the students so I could answer questions as they arose and help to facilitate movement that really reflected the science. What if you are a classroom teacher and you don't

have dance experience but you still want to use it in your classroom? Do your research! Watch dance videos, read the dance standards, learn the pertinent dance terms and try to create your own movements. You don't necessarily have to dance in front of your students (although they will love you if you do!) but if you have tried it yourself on your own, you can better understand the process in which your students will be engaged and be a better facilitator of that process.

- **Consider the Music:** As alluded to in "Break It Down", I have found when integrating that the best way to start the choreography process is to focus on the movement. I allow the students to experiment with the types of movement they might use. Then I introduce the music I plan to use so they can start to refine the movement and coordinate it with the music. In choosing the music, you may want the music to create a mood and help inspire the movement and/or you may want the music to create a steady beat and sets of counts. For the rapid earth change dances, I had each section last for 8 slow counts so the whole dance was a total of 24 counts. I also used the same music for each group so they could all rehearse together regardless of what process each group was portraying. I almost always use instrumental music or music with lyrics sung in an unfamiliar language so as not to detract from the choreography unless the lyrics are crucial to the message being danced.
- **Allow the Students to Choreograph:** I generally have the students create the movements themselves. I may teach specific dance steps that could be useful to their choreography (like chasse which is basically a sideways gallop) or a skill like using a focal point to bring in the audience or help a

dancer “spot” while turning. That is part of the dance content teaching. Ultimately, allowing the students to decide on what movements would best show the science concept is where all that rich learning happens. They have to know dance and science in order to create effective choreography and as you facilitate that process, their understanding of each will deepen and grow. **VOLCANO dance**

- **Plan Ample Reflection Time:** I feel like a charlatan as I write this because I repeat this mantra often and don’t do it nearly enough in my own practice. In the case of the rapid earth change dances, the students had not learned the science concepts early enough in the term for the students to apply what that had learned in science and dance to both choreograph a dance and then reflect and revise. The students did not have an opportunity to view their own pieces and make changes based on what they saw. I allowed for discussion in rehearsal to revise as they choreographed but there was no time for peer feedback or self-critique. I gave some feedback myself but even that did not have time for follow-through. For example, I had spoken to one group that was representing a tornado and began by showing the warm and cold air masses colliding. When I challenged them to use BEST to show the difference between the air masses, they suggested moving at a high level for warm air since heat rises and at a low level for cold air. I added perhaps they should use a different locomotor movement and energy for each as well like sharp energy for cold air and smooth energy for warm air but there was not enough time to follow-up on whether they had applied that to their choreography (which they did not). The ideal situation would be for those ideas and that feedback to come from within their own groups and from their peers. If you have the technology, students could group up and

watch their performances on tablets or computers and self and peer critique. That takes time and planning which, again, is especially crucial if you are collaborating with another teacher.

MUSIC AND LANGUAGE: BUILDING CONNECTIONS FOR ELL LEARNERS

Presented by: Mary Dagani, mdagani@dusd.net

(Building a Background)

*There are 4 Language skills that we sequentially transition through while developing a language:

Listening
Speaking
Reading
Writing

*Each of these levels becomes more complex and is dependent on the previous levels development to transition learner to the next.

Now, thanks to Krashen & Terrell in 1983, the second skill, speaking, can be broken down into 5 predictable stages:

Preproduction
Early Production
Speech Emergence
Intermediate Fluency
Advanced Fluency

<http://www.ascd.org/publications/books/108053/chapters/The-Stages-of-Second-Language-Acquisition.aspx>

These terms are probably what most of us are very familiar with. Our second language learners can fall anywhere within these stages.

So, how can music help us?

Music **IS** a language. Musicians develop their craft by traveling through the same stages as we did learning our native language: listening, speaking/playing, reading, writing/composing

Both music and language:

- Communicate ideas,
- Make meaning,
- express feelings/emotions
- Aurally and orally transmitted
- Involve syllables/rhythm, sound/inflections, phrasing, rate/tempo – hmmm, starting to sound like fluency??

Music is fun for children and helps to build community.

It is highly motivation and keeps the affective filter low (low stress) and helps provide more comprehensible input for students.

Listening stage:

- Rhyme rhythm repetition - Kids love animal songs and songs that repeat
- K.I.S.S. (short, easy to remember, limited range)
- **Poetry songs poems find the steady beat (fast or slow)**
- Responding to Music - Story board activity – pictures representing sounds/songs
- **Vocabulary building with visuals & TPR (James Asher) - <http://www.tpr-world.com/>**
- Including movement helps to gain control over coordination
- Use rote learning – seeing the lyrics and looking for familiar text
- **Auditory discrimination – sounds of instruments – compare loud/soft or high/low**
- Auditory sequencing – putting sounds in order
- following directions through folk dances
- Pitch perfection is not the aim – it is for enjoyment

(ideas from video included in this file)

Bate, Bate

Deaf Donald

Instrument Guessing page

Love Somebody (3 PDFs)

Speaking stage:

- Echo me – mimicking – use lots of expression
- **Call/response**

- Circle games
- dances
- puppets and theatre

Reading stage:

- With older students – use lyrics – but be careful of content and purpose of the song
- Structure/Form of songs
- Play with the lyrics – scramble, tenses, close activity (leave out a word)

Rapping it up!

- Music builds community
- Reinforces vocabulary development
- Share cultures & history
- Influences Mood and SEL
- Boosts creativity
- Builds confidence through performance

Resources:

Where to find songs: <http://www.bethsnotesplus.com>

Books by John M. Feierabend:

[Beginning Circle Games](#)

[Echo Songs](#)

[Songs & Rhymes with Beat Motions](#)

[Call & Response](#)

[One, Two, Three...Echo Me! By Loretta Mitchell](#)

Books by Eric Jensen:

[Arts with the Brain in Mind](#)

[Music with the Brain in Mind](#)

Suggested CDs:

[Putumayo Kids Presents – World Playground](#)

[Simple Folk Dances by Georgiana Stewart](#)

[Multicultural Movement Fun](#)

Bate Bate Chocolate

Mexican Folk Chant

Ba – te,	ba – te,	cho – co -	la - te
Con ar -	roz y	con to -	ma – te.
U – no,	dos,	tres,	CHO!
U –no,	dos,	tres,	CO!
U – no,	dos,	tres,	LA!
U –no,	dos,	tres,	TE!
Cho – co -	la - te	cho – co -	la - te
Cho – co -	la - te	cho – co -	la - te

Lyrics:

Bate bate chocolate
 Con arroz y con tomate
 Uno dos tres CHO
 Uno dos tres CO
 Uno dos tres LA
 Uno dos tres TE
 Chocolate, chocolate, chocolate,
 chocolate!

Translation:

Mix (or stir), Mix (or stir) the chocolate
 With rice and tomato (aka "mole" sauce)
 1 – 2 – 3, CHO!
 1 – 2 – 3, CO!
 1 – 2 – 3, LA!
 1 – 2 – 3, TE!
 Chocolate, chocolate, chocolate, chocolate!

DEAF DONALD

Deaf Donald met Talkie Sue

But



was all he could do.

And Sue said, "Donald, I sure do like you."

But



was all he could do.

And Sue asked Donald, "Do you like me too?"

But



was all he could do.

"Good-bye then, Donald, I'm leaving you."

But



was all he did do.

And she left forever so she never knew

That



means I love you.

INSTRUMENT GUESS



Love Somebody

Traditional

Voice

The musical score is written on a single staff with a treble clef and a 3/4 time signature. The melody consists of a series of eighth and quarter notes. Below the staff, there are four heart-shaped boxes containing the lyrics: 'Love', 'some - bod - yi', 'Yes I doi', and 'Love some - bod - yi!'. The score is divided into four measures by vertical bar lines. The first measure contains the first heart, the second measure contains the second heart, the third measure contains the third heart, and the fourth measure contains the fourth heart. The score ends with a double bar line.

Love some - bod - yi

Yes I doi

Love some - bod - yi!

You're the one that I love best!

Steady Beat Grid

(16 Beats)

Love Somebody

(16 Beats)

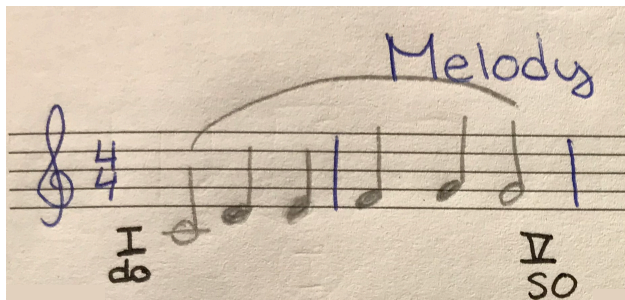
Love some-	bod - y!	Yes I	do!
Love some-	bod - y!	Now guess	who?
Love some-	bod - y!	Have you	guessed?
You're the	one that	I love	best!

Remixing Mozart

Presented by: Samuel Wright



This handout is to accompany the video entitled "Arts Integration - Mozart." It fits with a blog post available here: <https://wrightstuffmusic.com/portfolio/mozart-eresource>



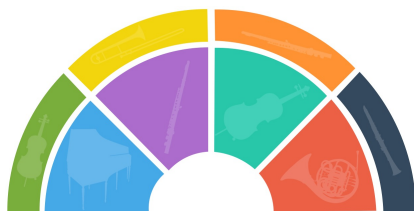
Approach & Outcome(s)

Approach: Learning to compose and remix from a style study of Mozart's music.

Outcomes:

1. An understanding of thematic/melodic writing in both Contemporary and Classical music.
2. The reworking and taking-apart of both styles of music to then recreate them using traditional notation.
3. Use chance and technology to remix the works of both Mozart and contemporary group *Clean Bandit*.

eResource Mozart K581



@wrightstuffmusic (twitter)

1 Mozart's Ideas

This complete online resource (linked above) outlines each theme/melody for the Clarinet Quintet K581. Then, much like *Clean Bandit* does, students learn to write out the melody and alter it by switching around bars, changing direction of the notes and rhythms.

2 Clean Bandit

Through listening and discussing the music (and music videos) of Clean Bandit we discover patterns and major comparisons for Pop music to Classical music. Things like arpeggios, the shape of a melody and repetition are good starters.

3 Mozart's Dice

In this section (and with other handouts) I encourage you to download the notation software *MuseScore* for free [MuseScore.org](https://musescore.org) for Mac or PC. You can write and experiment with Mozart's own Dice Game (file included) to make your own music through chance!

BAIN MUSC 215
Music Theory III

Musical Dice Game Composition

INSTRUCTIONS

Using the *musical dice game* described below,¹ compose a Classical era waltz for piano. This two-step algorithm generates a German *waltz* in 3/8 time (in the key of C major). More information is available online at:

<http://in.music.sc.edu/fs/bain/vc/musc215/project/>

The Algorithm

STEP 1: Roll a pair of dice 16 times.

Each time you roll, record the *sum* (2-12) of the two dice in the 16 boxes provided below:

<i>1st Part</i>	<i>m.</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8.1 8.2</i>
		A	B	C	D	E	F	G	H ²
	Sum								

<i>2nd Part</i>	<i>m.</i>	<i>9</i>	<i>10</i>	<i>11</i>	<i>12</i>	<i>13</i>	<i>14</i>	<i>15</i>	<i>16</i>
		A	B	C	D	E	F	G	H
	Sum								

The form of the waltz you are about to compose is: *1st Part*, 8 bars, mm. 1-8; *2nd Part*, 8 bars, mm. 9-16. Take a quick look at the *Sample Waltz* (Example 1) on the next page. This is one of the approximately 11¹⁶ possible waltzes³ the algorithm can generate. Be sure to notice that the bars in each part are labeled A–H. You will use these letters in Step 2.

STEP 2: Using the *Table of 176 Musical Figures* available on IMSLP (a link is provided on the project website), look up the pre-composed musical figure associated with each of your 16 rolls using the two tables below.

Table 1. Use this table for the 1st Part, mm. 1-8

	A	B	C	D	E	F	G	H
2	96	22	141	41	105	122	11	30
3	32	6	128	63	146	46	134	81
4	69	95	158	13	153	55	110	24
5	40	17	113	85	161	2	159	100
6	148	74	163	45	80	97	36	107
7	104	157	27	167	154	68	118	91
8	152	60	171	53	99	133	21	127
9	119	84	114	50	140	86	169	94
10	98	142	42	156	75	129	62	123
11	3	87	165	61	135	47	147	33
12	54	130	10	103	28	37	106	5

Table 2. Use this table for the 2nd Part, mm. 9-16

	A	B	C	D	E	F	G	H
2	70	121	26	9	112	49	109	14
3	117	39	126	56	174	18	116	83
4	66	139	15	132	73	58	145	79
5	90	176	7	34	67	160	52	170
6	25	143	64	125	76	136	1	93
7	138	71	150	29	101	162	23	151
8	16	155	57	175	43	168	89	172
9	120	88	48	166	51	115	72	111
10	65	77	19	82	137	38	149	8
11	102	4	31	164	144	59	173	78
12	35	20	108	92	12	124	44	131

As demonstrated in the *Sample Waltz*, say your first roll sums to 7.⁴ Look up the musical figure number associated with that roll in Table 1. Since bar 1 is **measure A**, combine the letter A with the current **roll 7** to yield Table 1 **cell A7**. Since the number in cell A7 is 104, look up **figure 104** in the *Table of 176 Musical Figures* on IMSLP and notate it in bar 1 of your score (a pdf template is available on the website). Say your **second roll** sums to 10: **B10** = 142, so notate figure 142 in bar 2. Say your **third roll** sums to 9: **C9** = 114, so notate figure 114 in bar 3, and so on.

¹ *Musikalisches Würfelspiel* (Musical Dice Game) attributed to W.A. Mozart (1756-91) and published by Nikolaus Simrock (Bonn: 1792). Available online in the IMSLP at:

<[http://imslp.org/wiki/Musikalisches_Würfelspiel_K.516f_\(Mozart,_Wolfgang_Amadeus\)](http://imslp.org/wiki/Musikalisches_Würfelspiel_K.516f_(Mozart,_Wolfgang_Amadeus))>.

² All of the bar H figures in the 1st Part have two versions: 8.1, the 1st ending; and 8.2, the 2nd ending.

³ For the exact number, see Peterson 2001.

⁴ For example, say you rolled a 3 & 4 (or any other roll that sums to 7).

Mozart's Dice Game

Music by Chance

During the Classical period in music, many composers created musical dice games in which compositions were created by chance via the throw of the dice. The most successful of these compositional games was created by Mozart. In the abbreviated version presented here, students can create a short waltz with the throw of the dice or by picking random numbers.

Directions for playing *Mozart's Dice Game*

1. Print out this document.
2. Cut each page into six individual cards, following the guide-lines.
3. Each card has a letter (A-H) and a number (2-12) in the upper left corner.
Arranged the cards into stacks by letter.
4. Roll a pair of dice. From the "A" pile, select the card which matches the number rolled.
5. Continue to roll the dice, selecting one card from each lettered stack.
6. Arrange the selected cards in alphabetical order.
7. Play your new composition.

Variation I

Instead of using dice, simply select one random card from each stack.

Variation II

Select any number of random cards, arrange them in any order you like, even up-side down!

Variation III

Using this document as a template, create your own dice game.

Have fun!

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MAKE SPACE FOR A MAKERSPACE

Presented by: Tiffany Wall

How to Incorporate Makerspace Activities into Any Classroom

Step One: You need STUFF!

- ☐ Send out Donation Letter to Families listing items needed: Recyclables, etc.,
- ☐ Send out email to fellow teachers about saving those recyclables for you.
- ☐ Other Idea: _____

Step Two: How Will You Organize Your STUFF?

- ☐ Separate tubs/baskets on shelving unit
- ☐ Separate tubs/baskets in large storage tote
- ☐ Stackable tubs
- ☐ Other Idea: _____

Step Three: Location of Makerspace

- ☐ Corner/Space in Classroom
- ☐ Rolling Cart (shared? --- yes --- no)
If shared where will it be stored when not in use? _____
- ☐ Stackable Tubs that come out as needed.
- ☐ Other Idea _____

Step Four: Setting Expectations

___ Lesson/Discussion with students (brainstorm below):

Step Five: First Makerspace Activity Plan

___ Brainstorm Below:

Final Question: How will I Continue to Incorporate Makerspace Activities Into My Classroom?

- ___ During Centers
- ___ Weekly (for example: Maker Fridays)
- ___ Cumulative Projects as Appropriate
- ___ Early Finisher Activities

Donations for Makerspace

The items listed below are just some of the things that you could donate to our classroom Makerspace. Keep your eyes and mind open throughout the year—just because it's not listed doesn't mean it can't become a part in someone's amazing creation!

paper tubes	aluminum foil	plastic bottles	sponges
pipe cleaners	plastic cups	spools	wire
fun foam	straws	tape (any kind!)	cans
dowel rods	cotton swabs	plastic caps/ lids	index cards
cardstock	yogurt cups	wired ribbon	chip tubes
berry baskets	M & M tubes	egg cartons	silk flowers
beads	fabric scraps	toothpicks	small tiles/ stones

LANGUAGE AND THE ARTS: KEYS TO COGNITION

Presented by: Matthew Varnell

Corey Academy follows the A+ Schools model of Arts Integration from North Carolina. We seek to use multiple intelligence strategies every day and to find authentic arts integration opportunities as often as possible. While a multiple intelligence strategy can happen in any class at any time, an arts integration lesson occurs when a Fine Arts Standard and a non-arts Standard are taught in tandem. It is important that these opportunities are authentic. Forcing integrations where they may not exist can be disingenuous, or worse, detrimental. If the system values collaboration, the system supports collaboration with its infrastructure. At Corey, arts integration days occur each six weeks to identify curriculum connections and design integration lessons across content areas.

As pre-work for our collaboration sessions, teachers complete the concept map and vocabulary for each six weeks on a collaborative Google spreadsheet. Teachers complete the concept map for the next six weeks as well as the key vocabulary for the next six weeks. During the collaborative planning, teachers are able to cross reference their content with content in all disciplines to identify common vocabulary and plan for integrated lessons.

Follow this link to access a sample of the Google spreadsheets.

<https://tinyurl.com/CoreyFADL-Dr-Varnell>