



***We Can See Clearly Now – Using Art to
Expand Understandings of Personal Cultural Identities***

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This curriculum unit is recommended for:
Second through Fifth Grade Literacy and Art Classrooms

Keywords: visual text, critical thinking, creative thinking, art, writing, visual thinking strategies, biography, visual intelligence, depth of understanding, observation skills, communication skills, collaboration, integration

Teaching Standards: See [Appendix 1](#) for teaching standards addressed in this unit.

Synopsis: This curriculum unit uses the practices of Visual Thinking Strategies (VTS) to involve students in problem solving, growing comfortable in sharing their own ideas, and respecting and learning from their peers' perspectives. The questions posed and rigor demanded mirror the expectations students face in their reading and writing instruction. Practice with these skills using visual texts will build their confidence and skills and increase their success in going deeper and referencing the text in their writing and reading. Once students become proficient at using VTS, they will apply these strategies to understanding information found in picture book biographies. Using the practice of list making, students will convey the important information about the individuals they study. Creating a list poem, students will next communicate what is important about them. This will be combined with a Cubist art project where students will create self-portraits. These two items will be displayed as part of a classroom gallery. This exhibition will provide students with another opportunity to engage in the VTS process to inspect one another's work and note the similarities and differences found there.

I plan to teach this unit during the coming year to the 22 students in my third grade class.

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Lecia Shockley

Introduction

Rationale

It has been said that a picture is worth a thousand words. With each passing year of my own life I better understand this truth. My own half-century of memories are stored as rich and colorful still and moving pictures. These images help me to remember. Over time I have come to recognize that my understanding is enhanced when images and other graphic tools are integrated into the learning process. Visual images help me to connect, clarify, define, interpret, translate, organize, construct, classify, discover, and imagine.

As an educator I have seen time and again the power of visual images to pull students into learning and enhance the depth of their understanding. The use of illustrations in children's books is a wonderful example. Children just learning to read will frequently be given rebus books which allow them to "read" pictures substituted for nouns in a story. This enables them to engage in more complex texts than they would be able to decode independently. As their phonetic and word recognition skills increase, students are taught to "picture walk" through a book to preview the story prior to attacking the words. This simple strategy has emerging readers use the story's pictures as clues to understand meaning and to decode unfamiliar words. A picture walk additionally fuels children's innate curiosity and encourages their interest in a story. More mature readers delight when they see a gold Caldecott Award or silver Caldecott Honor medallion affixed to a book because they know that it will have illustrations that have earned it the recognition of being one "of the most distinguished American picture books for children."¹ A newer pairing of images and text is the graphic novel. Educators find these useful for teaching new vocabulary and helping students clarify a story's meaning. These texts help struggling readers to gain confidence and increase enjoyment in books.

Like me, my students benefit from the integration of visual images into their learning. Even better, I think our knowledge, our communication, our relationships, and our communities can be profoundly improved through a systematic acquisition of skills in how to observe and analyze those images, and then articulate our clearer picture.

Today's 21st century students are exposed to a multitude of visual images each day: print, advertising, billboards, signs, television, movies, the web, social media, smart technologies. The results of this continual bombardment of visual stimulation are both considerable difficulties in maintaining sustained focus and a diminished sensitivity to

the images themselves. I believe that the homeopathic understanding “like cures like” is perfectly applicable to resolving this dilemma. Instead of students becoming numbed to the images in the world around them, I propose that images can be used as instruments to help them expand their focus, knowledge, depth of understanding, and, ultimately, their achievement. My aim is to use images in the form of paintings, sculpture, and photography to develop students’ “visual intelligence” through attentive, active, and articulated observation. They will then apply the strategies and skills learned in this training to their reading, writing, and relationships. Art Historian Amy Herman has said, “Learning to see what matters can change your world.”² I look forward to facilitating my students “seeing” through this unit in order that they might realize enriched academic and personal success.

As an educator, I am convinced that I have a responsibility to provide a foundation of understanding for students so that they can continue to realize success in the world in which they will live. Academic achievement is only one of the tools they will need to thrive in the 21st century. Students need skills, knowledge, and understandings that will enable them to succeed personally, professionally, and civically in our progressively more complex world. This preparation can be accomplished through weaving 21st century interdisciplinary themes into the mandated curriculum demands at any grade level. Vital elements of this approach include global awareness, social and cross-cultural skills, civic literacy, cultural literacy, communication and collaboration, flexibility and adaptability, creativity and innovation, critical thinking and problem solving, and leadership and responsibility.

My research has convinced me of the importance of providing students with the tools that they need to be successful with both academic and cultural literacy. Art is a means for expanding student aptitude for working with multimodal texts and improving observation, comprehension, and communication skills. Instilling creativity and artistic expression into inquiry-based learning is a best practice that deepens understandings, creates connections, and provides intellectual challenges for students. Art becomes a vehicle for dynamic, relevant, and inclusive learning.

School/Student Demographics

This instructional unit is being designed for the twenty-two students in my third grade classroom. I teach at Selwyn Elementary School in the Charlotte-Mecklenburg School District, a large, urban school district in North Carolina. It is a well-regarded, high performing school in south Charlotte that serves students in grades kindergarten through fifth grade. Our students experience strong academic growth in a rather insular cultural environment. While this setting provides myriad academic growth opportunities, it fails to provide important chances for students to expand their identification with those who are different from themselves in race, culture, or background. [Selwyn has 868 students, 78.5% of whom are Caucasian. The rest of the population breakdown is 10.4% African

American, 7.1 % Hispanic, and 4% other (Source: Charlotte Mecklenburg Schools - 2014). This is compared to Charlotte's demographic breakdown of: White – 45.1%, Black/African American – 35%, Hispanic – 13.1%, Asian – 5%, other – 1.8% (Source: 2010 U.S. Census Bureau) or the United States breakdown of: White 62.1%, Black/African American – 13.2%, Hispanic – 17.4%, Asian – 5.4%, American Indian – 1.2%, other – 0.7% (Source: 2014 U.S. Census Bureau)].

Unit Goals

This curriculum unit will use Visual Thinking Strategies (VTS) to develop students' observation, critical thinking, and communication skills through the examination of art from across mediums, cultures, and time periods. They will be trained to examine all the details, to look from differing perspectives, to draw conclusions, to make connections, to communicate clearly, and to collaborate with others.

The implementation of the Common Core State Standards requires teaching readers to improve the attention given to the text. A key strategy that educators are currently using to accomplish this is close reading. This demands a concentrated, critical analysis of a text focusing on noteworthy details and patterns to develop depth and exactness of understanding of the text's form, craft and meaning. Essentially, close reading asks students to do the same thing with words that VTS trains us to do with images.

In elementary writing instruction we teach students to “show not tell” and to expand their work by providing “more details.” The Common Core State Standards does not designate descriptive writing as its own category of distinguishable writing genre. Instead, descriptive writing constitutes a set of skills that all other genres require for effective communication. Again, these are the same vital skills that are developed as a careful observer of visual images through VTS.

In addition to the demands to develop depth of understanding in literature and informational text, and to write with descriptive precision, American schools strive to expand student competencies in technical studies. A big push by the U.S. Department of Education in recent years has been STEM education – the types of skills that students learn by studying science, technology, engineering, and math. The goal of this is to equip students with the knowledge and skills to solve tough problems, gather and evaluate evidence, and make sense of information. Conversely, not long ago the U.S. Department of Education painted a dreary picture of arts education in our nation's schools by noting that close to four million American elementary school students do not get any form of visual arts instruction at school.³ Education organizations like Lilly Sarah Grace are promoting a more holistic approach with their Arts-Infused Inquiry Based Learning model⁴ – a STEAM rather than STEM perspective. Arts that are integrated into the curriculum enhance depth of understanding for all learners.

In this unit, once students have had repeated practice with the VTS model, they will then use it with art that they have created themselves to represent their identity. The goal will be to have the group develop a shared understanding and appreciation for their commonalities as well as their individual differences.

Finally, students will use the knowledge gained from their VTS experience to inform their narrative writing as they write with specificity and elaboration about what they see as most important about themselves. Once again, students will use methods associated with sharpened visual perception to identify the group harmonies. The result will be not only improved student performance in text dependent writing, but also the development of a classroom culture that values both a connection to and a celebration of one another.

My goal is to use the concentrated observation of art (from varied cultures, time periods, styles, and mediums) to kindle students interests and abilities in looking more closely and seeing more clearly. The skills will enable them to better engage with their world through the literacy modes of reading and writing. The unit's supporting texts and activities will be chosen to nurture students' understandings of their own and other's cultural identities and will provide an opportunity for discovering celebrated differences and inarguable commonalities within a single community.

This unit will be used as a tool to strengthen our classroom community culture through increased respect and understanding of individual differences and similarities. It will provide a springboard for us to expand our connections beyond our schoolroom to our city, our country, and our world. The academic vehicle for this will be written expression, with a focus on descriptive language. Students will also explore cultural variances through art. This will involve attentive observation of selected works of others and thoughtful creation of their own artifacts. Additionally, they will uncover how these understandings can inform their role as citizens in a broader community, both locally and globally.

Content Research

One hundred and twenty-five years ago British polymath, John Lubbock, wrote "What we do see depends mainly on what we look for. ... In the same field the farmer will notice the crop, the geologists the fossils, botanists the flowers, artists the colouring, sportmen the cover for the game. Though we may all look at the same things, it does not all follow that we should see them."⁵ Our eyes are remarkable in in that they tackle the immense task of bringing the world to us through what they absorb and then convey. Vision, however, has less to do with how focused and penetrating one's eyes are, but more to do with the work our brains engage in as the unsung heroes of our visual processing systems. In fact, twenty-five percent of our brain and sixty-five percent of our brain pathways are used to process what we see. Cognitive conditioning that hones our capacity to observe, discern, and communicate has been shown to increase our brain processing speed.⁶

Scientists are currently working to hold back the effects of dementia through mental stimulation. Brain training sites like Lumosity, NeuroNation, and Brain Metrix offer adults brain workouts intended to challenge, increase, and maintain cognitive abilities. Visual intelligence is an area of brain functioning that offers a new vision of effective learning and communication for this 21st century. We can train our brains to perceive the world more clearly when we are intentional, systematic, and collaborative in looking at what we see.

I first became interested in the ideas behind visual intelligence after hearing a segment on the NPR show “All Things Considered.” In it, the art historian, Amy Herman, was interviewed about her work with NYPD officers in training them to more carefully and precisely perceive the world around them through the analysis of works of art.⁷ Through her seminar, *The Art of Perception*, she has taught professionals including those in the FBI, the U.S. State Department, the U.S. military, as well as ER doctors, Fortune 500 companies, and police departments across the country, to use art to see what matters in their respective fields of expertise and their personal lives. The core of her program explains how to assess, analyze, articulate, and adapt – first art, and then the challenges found in their respective work.

To assess one must first recognize and diminish the impact of perceptual filters. Next, one needs to observe objectively (who, what, when, where) and then look more closely to uncover hidden details. In analyzing a piece, all senses are considered as well as the perspectives of others. Effort is made to convey one’s perspective fully (e.g., What would someone else coming into my world not know?) and to prioritize information (What do I know? What don’t I know? What do I need to know?). Training to articulate includes ensuring that words are objective and specific, and that non-verbal communication supports the verbal message. Practicing delivery (repeating, renaming, reframing) is another essential element. The last step in her process, adapt, has participants adjusting for unconscious and experience biases and using these recognized biases as tools for finding facts. Participants report that the training to become active and alert observers and communicators has helped them to achieve new measures of success and understanding in their personal and professional lives.⁸

This success and understanding is exactly what I want for my students. The steps Amy Herman describes are akin to the literacy strategies I teach to my young readers and writers. It made me want to know more. My research has made me a true enthusiast of the applicability of the visual intelligence model to balanced literacy instruction. I’m convinced that it has great potential for increasing student comprehension of texts, elaboration of both written and verbal communication, and pleasure in the learning process.

In her book, *Teaching, Learning, and Visual Literacy*, Billie Eilam argues that visual representations (illustrations, chart, graphs, maps, artworks, photographs, videos,

animations, etc.) should be as much a part of the definition of literacy as verbal representations (printed or spoken words). Diverse forms of visual representation help to facilitate the progression of understanding from concrete to abstract. She submits that knowledge about visual representations is learned indirectly rather than through formal instruction and that this leaves students without the systematic and metacognitive knowledge that could be transferred to a wide array of academic circumstances. She states,

Teachers must understand the diverse potential impacts of visual materials – as the primary route for directly representing information, as emphasizing and pointing out specific details of particular information, as a means of improving students' cognitive learning abilities, as enabling students to interpret information presented in various forms or to understand difficult phenomena.⁹

Eilam notes that visual representations perform different functions within a school: ornamental aesthetics (creating a pleasant learning environment), motivational (posting of student work), administrative (bulletin boards with announcements), sociocultural educational (flag), and cognitive. This last function can include anchor charts, diagrams, maps, models, and art. Her research specifies that usage of visual representations require deliberate instruction in comprehension and interpretation strategies. They are not grasped spontaneously by students.¹⁰ While this research focuses much of its attention on the visual representations that would be found in school and the lives of students as a matter of course, I find her arguments for purposeful academic direction compellingly supportive of the conclusions made by Amy Herman.

St. John's University professor of Reading (as well as Associate Dean for Academic Affairs for The School of Education and Director of the Reading and Writing Education Center), Richard Sinatra, championed the idea that visual literacy paves the way for the thinking, composing, and comprehending needed to read and write effectively. He points out that visual literacy is a rudimentary aspect of human thought as illustrated by the fact that in more primitive cultures visual literacy is demonstrated by emblematic forms as the prevailing literacy. His definition of visual literacy is "the active reconstruction of past visual experience with incoming visual message to obtain meaning."¹¹ An important result of this cognitively active viewing is the development of representational thought, which is thinking by analogy, metaphor, and symbols. Developmental models, like Piaget's, offer that literacy progresses from visual to oral to written. Sinatra illustrates that these literacies have an interconnected relationship and continue to interact to build understanding.¹² This aligns well with what I see in my own classroom when I use visual components in my lessons to support and expand student understanding. Visual literacy is not something to be left behind as children mature as readers and writers; instead, it is a best practice for deepening understanding and creating connections.

Frank Serafini, professor of Literacy Education and Children's Literature at Arizona State University, has spent much of his career writing for children and about how to move children on to reading success. He describes the challenges newly encountered by today's young readers. The texts they are tasked with decoding and comprehending are multimodal in nature, meaning they incorporate a number of modes beyond alphabetic written text. Students are regularly asked to examine visual images, graphic design features, videography, and hypertexts as part of their reading experience. Serafini contends that comprehension requires moving beyond traditional cognitive strategies. To construct meaning educators must develop a model of comprehension that addresses the multiple modes of representation integrated into multimodal texts. He proposes using perspectives found in art theory, visual design grammar, and media literacy to provide lenses for helping to focus student's attention on the visual elements in the texts they tackle. Art, like the written word, is a system of meaning. It is meant to be considered for understanding. Serafini offers guiding questions to assist readers in analyzing visual and design elements that might otherwise be overlooked. Like Herman, he wants "readers" to move beyond literal observation and meaning to the layered complexities a visual image can convey. He urges literacy educators to become more intentional in their instruction so that students are able to find connection with, and multifaceted meaning in, the texts of today.¹³

Our CTI seminar, Literacy and Literacies, has been a place where all these all these thoughts about the multidimensional nature of literacy in the 21st century have had the opportunity to be molded and tempered. One colleague, Sarah Korenyik, was the first to mention Visual Thinking Strategies, or VTS, as a methodology for impacting student understanding. In one of our early seminars we deliberated over selections from *Literacy Instruction for Today's Classroom: Implementing Strategies Based on 20 Scholars and Their Ideas*. I was fascinated with Neal Postman and his ideas about communications theory. He believed that television posed a threat to complexity and discourse in the educational setting. This chapter proposes, however, that with the explosion of digital resources available to and utilized by students, educators must help students to become fluent in numerous literacies. In support of this thesis, the author follows a case study of the use of VTS in a middle school classroom in Florida. Visual Thinking Strategies is learner-centered methodology for examining visual art through a process of questioning and expressing ideas in a collaborative environment. The goal is to improve comprehension and communication. In this study students were encouraged to transfer the skills they were using when observing art to their writing – "making thinking visible." Students learned to verbally express what they saw with supporting elaborative details. Additionally, students learned to participate in academic conversations with others in which they crafted understanding by building on one another's ideas and perspectives. This study demonstrates the benefits to student understanding when educators are alert to the multifaceted nature of literacy in the 21st century and are intentional about integrating visual sources and study into learning.¹⁴

This investigation led me to immerse myself in an examination of Visual Thinking Strategies. VTS is an inquiry-based instructional method first developed for museum education programs over twenty years ago. The principle of the technique has learners examining art to become visually literate, develop critical thinking, and increase effective communication. Its creators, Abigail Housen and Philip Yenawine, have established an inquiry-based curriculum used in museum teaching and classroom instruction both in the U.S. and internationally. Housen, a cognitive psychologist and former Director of the Graduate Program in Art Education at the Massachusetts College of Art, began her research into how people view art in the early 1970s. At that time she was able to demonstrate that when looking at and discussing works of art, individuals understand the art in predictable patterns, termed stages of aesthetic development.¹⁵ Yenawine, has been involved in museum education for more than forty years. From 1983 to 1993 he was the Director of Education at the Museum of Modern Art in New York City. He continues to write and speak about art and its applicability to twenty first century learning demands for developing creative and critical thinking, collaborative work models, and elaborating dialogue.¹⁶ VTS was originally developed to assist in teaching in the galleries of MoMA after Yenawine became concerned about the visual literacy of those who came to visit. The model's intention is to stimulate aesthetic growth or a "change in viewing." They soon found that they had a curriculum that was going to be very useful for schools for purposes far beyond visual literacy.¹⁷

In VTS art is used to teach critical and creative thinking, communication skills, and visual literacy. The actions that stimulate growth are looking at art of growing complexity, responding to open-ended questions, and participating in collaborative discussions that are facilitated by educators. Art selected should receive thoughtful consideration with regard to developing affinity for art, personal connection, and what is suitable for helping viewers to make sense. Image selection should consider: accessibility, expressive content, narrative, diversity, realism themes, type of medium, artistic genre, key artists and works.¹⁸ The questions require students to focus, reflect, and question. They begin an active process of discovery for students. There are three simple open-ended questions used for each lesson; "What's going on in this picture?", "What do you see that makes you say that?", and "What else can you find?" The discussions generated by these questions stimulate rich analyses of the art, encourage evidential reasoning, and nurture collaborative problem solving.¹⁹ VTS discussions are structured to provide immediate feedback. Student responses are acknowledged and paraphrased to ensure that all participants hear each comment and to signal to the group the value of every person's contribution. VTS is intended to provide an opportunity for students to speak in a non-threatening environment. In addition to acknowledging every comment, the facilitator must cultivate the group dynamic and assist students in linking together various strands of thought. To conclude a lesson or a series of lessons, teachers will ask students to complete a short writing assignment about a piece of art, the discussion that ensued about it, and their own response to the text and exchange.²⁰

As part of my research process, I was able to spend time with Christopher Lawson, the COO of the Bechtler Museum of Modern Art in Charlotte, North Carolina. He has worked with Amy Herman and is an expert VTS facilitator. He has been training doctors at Carolinas Healthcare System and teachers in the Charlotte region to utilize VTS in their respective fields for years. He clarified for me what he sees as the greatest benefits of VTS; the manner in which it enables participants to drop hierarchies and the development of an appreciation for sustaining attention on a text for an extended period of time. Lawson stated that a key tenet of Visual Thinking Strategies is that everyone has the right answer and are empowered to think for themselves. This kind of thinking can have tremendous effect on an emergency room or a classroom. The time taken to take a unhurried look at each visual image, to consider all the possibilities, and to think about “What else?” assists participants in decelerating to enjoy, contemplate, and connect in a manner sorely needed in the high-speed culture of the twenty-first century.²¹

The transfer prospects of VTS skills are significant. It connects handsomely to the Common Core State Standards. Its ability to connect with students across a varied - ability spectrum – from those with learning disabilities to those identified as academically gifted – makes it a tremendous tool for connecting and collaborating while also differentiating. Housen’s field research has revealed that VTS not only produces growth in aesthetic thinking, but also in other cognitive operations like observing, speculating, and reasoning on the basis of evidence. She has documented a transfer of skills from art viewing to reading, writing, and other cognitive tasks.²² The Isabela Stewart Gardner Museum in Boston, Massachusetts conducted a longitudinal case study of their school partnership program in which they considered not only the aesthetic development of participants, but also an overall upward trajectory in critical thinking. Increased critical thinking was demonstrated by all students, with elaboration and supported observations being the most prominent to grow. Moreover, students started thinking more openly and adaptably, allowing for their own viewpoint to be just one of multiple interpretations. Evolution was realized in students’ ability to speculate, ask questions, and consider diverse possibilities. Students’ revealed growth in oral language critical thinking skills and then demonstrated that these skills transferred to their writing.²³ The Harvard Graduate School of Education in partnership with the Museum of Modern Art’s Project Zero has also studied the cognitive and social benefits of VTS curriculum. They report that students describe experiencing the curriculum as challenging and engaging and that the process of “figuring things out” has cognitive value which they are able to transfer to other contexts.²⁴ Summaries of a number of additional research studies on the aesthetic, cognitive, and social benefits of use of VTS have been collected for review on the Visual Thinking Strategies website.²⁵

The promise that VTS holds for student growth in abilities of observation, critical thinking, elaboration in oral and written communication, as well as intrapersonal and interpersonal development makes it an exciting instrument for today’s twenty-first century classrooms. It is a strategy that I can hardly wait to implement with my third

grade students. In an interview on National Public Radio's Morning Edition, famed British artist recently said, "I think the idea of making pictures is deep within us." I believe introducing students to art through VTS will help them to examine and understand the work of others and enable them to better make and communicate pictures themselves.²⁶

Instructional Implementation

Teaching Strategies

NOTE: All links accessible when last accessed – October 2016.

Read Aloud – instructional guide at <http://www.readwritethink.org/professional-development/strategy-guides/teacher-read-aloud-that-30799.html>

Mentor Texts – explanatory article at <http://www.edutopia.org/blog/using-mentor-text-motivate-and-support-student-writers-rebecca-alber>

Think Aloud – more information at http://www.readingrockets.org/strategies/think_alouds

Visual Thinking Strategies – explained in the research section document at <http://www.vtshome.org/>

Academic Vocabulary and Language – examine strategies for teaching at <http://www.edutopia.org/blog/8-strategies-teaching-academic-language-todd-finley>

Word Wall – description at http://www.educationworld.com/a_curr/strategy/strategy062.shtml

Anchor Charts – explanation of why and how to use them at <http://www.weareteachers.com/blogs/post/2015/11/12/anchor-charts-101>

Brainstorming – effective use strategies at <https://teaching.unsw.edu.au/brainstorming>

Graphic Organizers - guiding principles and effective practices at <http://education.wm.edu/centers/ttac/documents/packets/graphicorganizers.pdf>

Venn Diagrams –how to use this simple graphic organizer to facilitate complex thinking at <http://www.learnnc.org/lp/pages/2646>

Guest Speakers –the benefits and how-to's of using guest speakers at <http://www.teachhub.com/classroom-management-guest-speakers-support-learning>

Class Discussion – ideas for how to use and improve these at <http://www.weareteachers.com/blogs/post/2015/03/18/13-strategies-to-improve-student-classroom-discussions>

Cooperative Learning – collection of articles about this teaching strategy at <https://www.teachervision.com/cooperative-learning/resource/48649.html>

Conferencing –multiple uses for this strategy at <https://www.myedresource.com/using-conferencing-as-an-instructional-strategy/>

Use of Educational Technology – common methods for integrating technology into teaching at <http://www.iste.org/docs/excerpts/nettb2-excerpt.pdf>

Classroom Lessons & Activities

This instructional unit is organized into six different sections, with each section requiring multiple sessions. Teachers should use their own judgement to adjust activities to best meet the needs of their students and teaching objectives.

Section 1: Introduction to and Practice with Visual Thinking Strategies (VTS)

I will begin by asking students some of the strategies they use to demonstrate their understanding of texts that they read. I will then use this information to progress into a discussion of art as text that can be “read” also. We will examine anchor charts to clarify the questions we will be asking about art and to understand the expectations for our discussions about art (Appendix 3).

I have selected nine intentionally sequenced images from varied times, cultures, and mediums. All the pieces contain a strong narrative quality and move in progression from most concrete to more abstract. To allow for group discussion, I will project the images onto a Smart Board using my document camera. [Note: Each of these images is designated Open Access by their respective museums and are available for scholarly use in any media. Links have been provided if teachers need images with greater resolution or would like to print poster size copies for their instructional use.]

Students are asked to first look at an image without talking. I suggest extending this “wait time” to a time that seems slightly uncomfortable, at least three minutes, so that students can have the opportunity to go beyond their first impressions and begin to see less prominent details of the text. I will then ask the particular, open-ended questions that are the foundation of VTS:

- What's going on in this picture?
- What do you see that makes you say that?

- What more can we find?

As the dialogue ensues from the answers these questions generate, I will ensure that all responses are heard and recognized, by pointing to what is mentioned as students share and respond, and then rephrasing what they said with neutral language. I will work to connect assorted related responses to help students to be aware of the similarities and differences of their perspectives, and of their growing skills at creating shared, yet diverse interpretations. Students are asked to support their analyses with evidence from the text whenever they offer an opinion.

Group discussions of each image can last anywhere from ten to twenty minutes. This is long enough for students to look intently at the text, form and express their opinions, hear and consider other viewpoints, wonder together, respectfully debate, and/or build on one another's ideas, and potentially reconsider their initial conclusions. After initial practice with the VTS format, teachers might decide to combine 2 images into one lesson session, although the process for each image would be completed separately. One advantage of doing this is the possibility of connecting a written response element to the lesson. Potential writing prompts could include:

- Compare [name the two pieces of art]. How are they similar? How are they different?
- What themes do you see in both [name the two pieces of art]? Support your answer with details from the text.
- Which piece of art did you most enjoy in today's lesson? Provide personal reasons and support from the text.
- What connection can you make to [name first piece of art] or [name second piece of art]? Explain your answer with at least two details.

Another strategy that could be employed to record student thinking and understanding is using Venn Diagrams to compare and contrast different pieces of art or student perspectives on a piece of art. Student discussions and writing about the visual text can be supported by the introduction of academic vocabulary associated with art. These vocabulary words can then be posted for student reference and use on either anchor charts or words walls. Refer to Appendix 3 for a list of possible terms and definitions.

For the implementation of my unit I have the good fortune of having Christopher Lawson, COO of the Bechtler Museum of Modern Art in Charlotte, North Carolina, coming to visit my classroom and facilitate some of the classroom discussions around our selected pieces of art. While this opportunity cannot be precisely duplicated for other class settings, teachers could easily include other guest artists to participate in or facilitate these lessons. Possible contacts might include local museum educators, gallery owners or employees, artists, art students at a local college, and art teachers at a local college, high school, or one's one school. Adding guests to these classroom discussions can help to

elevate the importance of the process in students' minds and add a new perspective to the dialogue.

The visual texts selected for this part of my unit can be found in Appendix 4. In order they are:

1. Washington Crossing the Delaware [Artist: Emanuel Leutze]
2. The Old Musician [Artist - Edouard Manet]
3. Ute Chief Sevara and Family [Artist - American 19th Century (Detroit Photographic Co.)]
4. Les Astronomes, from L'Histoire de l'empereur de la Chine Series [Artist/Maker: Beauvais Manufactory, Woven under the direction of Philippe Béhagle]
5. The Card Players [Artist: Paul Cézanne]
6. Gospel Book [Artist/Maker: Unknown Byzantine]
7. Girl with a Hoop [Artist - Auguste Renoir]
8. Terracotta amphora (jar) [Attributed to the Berlin Painter]
9. The Parc Monceau [Artist: Claude Monet]

Please Note: These particular selections were made based on their narrative nature. Because this unit will be digitally published by Charlotte Teachers Institute, I was restricted to digital images of artwork in the public domain that are available for scholarly and academic publication. I used carefully chosen images under OASC (Open Access for Scholarly Content) from the Metropolitan Museum of Art, NGA Images from The National Gallery of Art, and the Open Content Program at the J. Paul Getty Museum that met these specifications. I encourage other educators to incorporate narrative images that best represent the many cultures that compose their local community.

Section 2: Reasons for and Practice with Using Lists to Convey Important Information

Begin this section of lessons by brainstorming with students kinds of lists that are made. Common responses might include for grocery shopping, chores that need to be done at home, steps for a school assignment, gifts we hope to receive, ideas we might write about, things that need to be fixed around the house (a “honey-do” list), when running for president – a short list of possible running mates, etc.

Next, allow students to work together in pairs or small groups to generate lists of reasons that lists are helpful. Come together as a class to share and record these responses. Look for answers that include: they help us in organizing, they help us remember things, they can be as long or as short as needed, they have an end point that one can complete, they can be meaningful (e.g., listing the ways you love someone), they can help us focus, and lists keep us from procrastinating.

Following this, share with students some of the fun, famous ways that lists are used. These might include: *Fortune 500*'s list of wealthiest people, *U.S. News & World*

Report's annual list of best colleges, *People Magazine's* 100 Most Beautiful People, *Time Magazine's* top 10 of everything for a particular year, book - *1,000 Places to See Before You Die: A Traveler's Life List*, *Good Morning America's* segment called "Your Three Words." [see example at <https://www.youtube.com/watch?v=tpCIB1kpcA0>], informative lists like the 10 Best Kids Movies Ever [<http://www.moviefone.com/2014/06/02/best-kids-movies-ever/>], or unusual lists like Top 10 Tallest People in History [<http://www.sciencekids.co.nz/sciencefacts/topten/tallestpeople.html>]. Show students an example of an iconic David Letterman "Top Ten List" [preselected for tame content: The Top 10 Reasons I Decided to Become a Teacher at <https://www.youtube.com/watch?v=n-rahF94o1g>]. Facilitating a discussion about the relevancy of, values reflected in, and temporal nature of these lists should help students quantify the significance of the different lists in their own lives.

Students will then work with partners to create their own Top 10 Lists from a choice list. Options for these lists include: Top 10 things to do outside, Top 10 books we love, Top 10 flavors of ice cream, Top 10 reasons to come to school, Top 10 ways to be a friend, Top 10 things to do at recess, Top 10 kinds of shoes kids wear, Top 10 favorite fiction places, Top 10 pets, Top 10 ways to make a teacher adore you, Top 10 things to eat in the school cafeteria, Top 10 special area class ideas, Top 10 things to do on a snow day, Top 10 kinds of homework we wish our teacher would assign, Top 10 excuses for not having our homework, Top 10 back-to-school tools, and Top 10 things we wish were in a class treasure box. These will be shared with others and posted in a public space at school.

Section 3: Examining the Lives of Others through Biographies

We will begin this section of our unit by sharing the read-aloud *On a Beam of Light: The Story of Albert Einstein* by Jennifer Berne. As I read to students I will use think-aloud strategies to clarify meanings, define vocabulary, link text and illustrations, and make connections to myself/students, other texts, and the world. At a second sitting, I will read through the text again. This time, students will use a graphic organizer (Appendix 3) to chart their own observations and connections with the story. Following this students will participate in a Socratic Seminar to share their observations and deepen their understanding of the text. The questions will mirror those they used to examine art using Visual Thinking Strategies. Serving as the facilitator of our seminar I will ask the following:

1. What part of this story did you think was most important? What do you see that makes you say that?
2. The book says that Albert's parents worried that he was different? Do you agree that being different is something to worry about? Why or why not?
3. Do you think that this book is more about what Albert Einstein did or what he thought? What do you see in the text that makes you say that?

4. What would be an example of a way that the illustrations in the book add to understanding of the life of Albert Einstein beyond what we already know from the text?
5. What connection can you make with Albert Einstein?
6. What question would you want to ask to find out more about Albert Einstein?

After this collective interaction and response to a text, students will work with partners and select a picture book biography to read together. Some of this will involve teacher direction to ensure that students are matched with texts of appropriate complexity. Once students have read the book thoroughly they will engage in academic conversation about the text and topic using modified VTS questions (See Appendix 3 for anchor chart and Appendix 2 for a list of suggested picture book biographies):

- What's going on in this story?
- What do you read or see that makes you say that?
- What more can we find in both the text and illustrations?

The next step in demonstrating their understanding of the subject of their text will be to cooperatively create a Top 10 list of important information about the individual. Lists will be typed and printed. Students will additionally create a picture of their historical figure. All class work will be put into a Google slideshow and then presented by students to their peers. The slideshow has potential to additionally be shared with parents. Typed papers and art will be displayed in the hallway so that the audience for student learning and work is expanded.

Section 4: Examining What is Important in Our Own Lives and Writing About It

Students will be introduced to the mentor text, *The Important Book* by Margaret Wise Brown. Discuss with students the similarities and differences between this book and the lists they have been creating. Explain to students that they are going to combine the format of a Top 10 list and the language of Margaret Wise Brown (“The important thing about ____ is . . .” and “But the important thing about _____ is . . .”) to share biographically what is important about themselves.

Students will begin by making a Top 10 list about themselves. Encourage them to list those things that they most want friends, teachers, and families to know and to leave out unimportant personal details. Once their lists are made, they should prioritize the list from most to least important. Students will conference with me to ensure they understand the structure, are editing and revising their work, and are giving the assignment their best effort. Once student have completed these steps, they will type their final copy in Google slides.

Section 5: Representing What is Important About Us Through Art

In this section of our unit we will be returning to art, although this time it will be art created by students. Students will be introduced to the artist Pablo Picasso using a YouTube video at <https://www.youtube.com/watch?v=33BCnqpS8NA> [Note: While this 4:55 minute video has excellent simplified content and claims to be for students, there is a short portion from 2:49-3:04 that shows his abstract nudes. In my own classroom I will be prepared to forward through this 15 seconds so that the most appropriate content is delivered to my students.]. Next we will begin to create our own Picasso-like self-portraits of ourselves.

Materials needed: 9x12 pieces of white construction paper, 3x5 pieces of assorted light and dark colors of construction paper, pencils, rulers, markers, scissors, glue sticks.

Inform students that they are first going to make a sketch of their head. All work should be done lightly in case they want to edit later. Using a pencil, students should lightly draw an oval shape for their heads on their 9x12 piece of construction paper. It should take up about 2/3 of the page. Students should then make a light dot in the center of the head and then use this as a marker to lightly sketch a line dividing the oval in half. They can then lightly pencil in two eyes on this line. The nose can then be sketched halfway between the line and the bottom of the oval. The mouth would go halfway from the nose to the bottom of the oval. Students can now add a neck and shoulders to the bottom of their ovals and hair around the top (and perhaps sides) of the oval. Once this is done, this sketch can be set aside. Now using 3x5 pieces of construction paper, students will make eyes (one from the front, one from the side) and a nose. These should fill up the majority of the space on their paper. Students will then decide on placement of these pieces on their head and glue them down. Students can use rulers to pencil in angled lines from the corners of the 3x5 sheet to the edges of their faces. Now students can complete their pieces by coloring in all the sections and using unusual color combinations for the face.

Section 6: Conclusion

Students "Important" writing and their cubist self-portraits will be displayed together gallery style. Using our VTS procedures (plus the modified questions for written texts) we will spend time exploring our individual and collective work. The focus of this time will be looking for themes that we share as well as what stands out about each of us that makes us unique. We will engage in the questioning and responding to our visual and written expressions of who we are to understand each other better and to create connections that we didn't realize were already there.

Appendix 1: Teaching Standards

Key Ideas and Details

The English Language Arts portion of the third grade Common Core State Standards has standards for Key Ideas and Details in both the Reading Literature and Reading Informational Text Strands. In both, students are expected to “ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.”

Integration of Knowledge and Ideas

Third grade Common Core State Standards for English Language Arts Reading (both Literature and Informational Text) require that students use the information gained from illustrated and written text to demonstrate understanding, describe connections, and compare and contrast important points and details.

Text Types and Purposes

The Writing Standards of the third grade Common Core State Standards require that students be able to provide reasons to support their opinions, develop topics with facts, definitions, and details, and use descriptions to illustrate.

Comprehension and Collaboration

Within the Speaking and Listening Strand of third grade Common Core State Standards for English Language Arts students are mandated to “engage effectively in a range of collaborative discussions with diverse partners, building on others' ideas and expressing their own clearly.” (Standard One) Standard Three states that students should be able to “ask and answer questions about information from a speaker, offering appropriate elaboration and detail.”

Presentation of Knowledge and Ideas

The Common Core State Standards for English Language Arts Speaking and Listening Strand also anticipates that third grade students will report, tell, and/or recount “with appropriate facts and relevant, descriptive details, speaking clearly at an understandable pace.”

History

In North Carolina Social Studies Essential Standards are established by the Department of Public Instruction. The first of five strands is History. Students are required to “Use

historical thinking skills to understand the context of events, people and places.” Students are to use historical narratives to explain change over time and multiple perspectives.

Culture

The fifth strand of the NCDPI Social Studies Essential Standards asks that students understand how diverse cultures are visible in local and regional communities. Its second Clarifying Objective specifically looks at “how various groups show artistic expression within the local and regional communities.”

Visual Arts

The North Carolina Essential Standards for Third Grade Visual Arts have been developed by the Department of Public Instruction. The first strand, Visual Literacy, requires students to “use the language of visual arts to communicate effectively.” This is accomplished through identifying themes and through understanding that art is used to express personal ideas. This strand also has students apply creative and critical thinking skills to their own artistic expression. Contextual Relevancy is the second strand. Its focus is on understanding “the global, historical, societal, and cultural contexts” and “the interdisciplinary connections and life applications” of the visual arts.

Appendix 2: Unit Resources

Teacher Resources

Books

Visual Intelligence: Sharpen Your Perception, Change Your Life by Amy E. Herman.
Art historian Amy Herman trains experts in a variety of fields how to perceive and communicate better. She teaches people how to look closely at images to improve their “visual intelligence.” In addition to helping people see the physical objects they might be missing; she also trains them to identify the talents, opportunities, and dangers that are a part of their lives.

Visual Thinking Strategies: Using Art to Deepen Learning Across School Disciplines by Philip Yenawine

The renowned former education director at New York’s Museum of Modern Art and co-creator of VTS, Yenawine writes about his experience working with elementary students. This book details how VTS was initially developed and illustrates how teachers can use art to increase a host of academic skills, like writing, listening, and speaking, across the curriculum spectrum.

Making Thinking Visible: How to Promote Engagement, Understanding, and Independence for All Learners by Ron Ritchhart

Harvard’s Project Zero developed Visible Thinking, an approach that develops students’ thinking dispositions, while also expanding their understanding of what they are studying. Unlike the set of fixed lessons in VTS, Visible Thinking is a collection of practices that can be applied with students at all grade levels and in all content areas.

Digital Formats

<http://bigthink.com/videos/amy-herman-on-visual-intelligence-and-the-pertinent-negative>

This is a great short activity [4:55] with Amy Herman at BigThink. It gives you the opportunity to take one of her perception tests using René Magritte’s artwork. The activity serves to remind us of how much detail is around us yet not registered by us. It illustrates ways to be more conscious in our perception.

<http://ed.ted.com/lessons/how-art-can-help-you-analyze-amy-e-herman>.

This brief five-minute TED-Ed video with Amy Herman is a great introduction to how art historical training can prepare you for real world investigation and can enhance your communication and analytical skills.

<http://www.vtshome.org/>

This is an expansive website on Visual Thinking Strategies (VTS). It provides a wealth of information and resources regarding VTS curriculum and research.

Student Resources: Suggested Picture Book Biographies

Amelia and Eleanor Go For a Ride by Pam Munoz Ryan

This book celebrates the bravery and revolutionary spirit of Amelia Earhart and Eleanor Roosevelt - two friends and American heroes. The story takes place on one April evening in 1933.

Barbed Wire Baseball: How One Man Brought Hope to the Japanese Internment Camps of WWII by Marissa Moss

This story is set in a Japanese-American internment camp in World War II. As a young boy, Kenichi Zenimura (Zeni) brought the game of baseball and a sense of hope to his camp, and came to be called the "Father of Japanese-American Baseball."

The Boy Who Loved Math: The Improbable Life of Paul Erdos by Deborah Heiligman

This is a wonderful introduction to the world of math and an absorbing look at the interesting life and unique character of this great mathematician.

Cloth Lullaby: The Woven Life of Louise Bourgeois by Amy Novesky

World-renowned modern artist, Louise Bourgeois, was known for her sculptures made of wood, steel, stone, and cast rubber. Her most famous spider sculpture, Maman, stands more than 30 feet high. As a child in France, Louise worked as an apprentice to her mother, a weaver of tapestries. This story chronicles their love and creativity.

Dream Big: Michael Jordan and the Pursuit of Excellence by Deloris Jordan

As a young boy Michael Jordan dreamed of playing basketball for the United States Olympic team. This is the story of how he turned this wish into a reality.

Harvesting Hope: The Story of Cesar Chavez by Kathleen Krull

Young Cesar Chavez was shy and teased at school. His family slaved in the field making barely enough money to survive. He knew things had to change for his family and for other migrant workers so he courageously spoke up and became known as one of America's greatest civil rights leaders.

Nelson Mandela by Kadir Nelson

This is the story of Nelson as a young boy who was determined to change South Africa, and as the man who eventually became the president of South Africa by believing in equality for all, no matter the color of their skin.

On a Beam of Light: A Story of Albert Einstein by Jennifer Berne

This is a powerful story about the significant difference that imagination made in the life of Albert Einstein. This book does a great job explaining his life and work to children.

Sitting Bull Remembers by Ann Turner

Sitting Bull was chosen to be the war chief of the Sioux Nation in 1869. He was also a visionary, a horseman, a hunter, and a man who had a deep kinship with nature. This book is a fictional portrait of Sitting Bull, looking back on the historical events that shaped his life and fate.

Six Dots: A Story of Young Louis Braille by Jen Bryant

This book tells the inspiring story of Louis Braille who was only five years old when he lost his sight. He desperately wanted to be able to read, but there were no books for him even at his school for the blind in Paris. To correct this he invented a whole new system for writing that could be read by touch.

Snowflake Bentley by Jacqueline Briggs Martin

Wilson Bentley had a determination to photograph snowflakes. As a scientist he proved that no two snowflakes are alike and as an artist he demonstrated that each snowflake is uniquely beautiful.

Star Stuff: Carl Sagan and the Mysteries of the Cosmos by Stephanie Roth Sisson

Carl Sagan went to the 1939 World's Fair as a young boy and his life was forever changed. This book chronicles his childhood gazing at the stars, his love of science fiction, and his work as a scientist exploring the universe.

The Story of Ruby Bridges by Robert Coles

Ruby was the first African American child to integrate a New Orleans school in 1960. She attends first grade at all-white William Frantz Elementary and daily faces angry crowds of parents who refuse to send their children to school while she is there. Her young courage and faith change the course of her school and our country.

Teammates by Peter Golenbock

This book tells the story of how Jackie Robinson became the first black player on a Major League baseball team when he joined the Brooklyn Dodgers in 1947. It records the day that fellow player, Pee Wee Reese, took a stand in Cincinnati, and declared Jackie his teammate.

The Tree Lady: The True Story of How One Tree-Loving Woman Changed a City Forever by H. Joseph Hopkins

This is the story of teacher, scientist, and tree-lover Kate Sessions, who helped San Diego grow from a dry, desert town into a flourishing and verdant city now known for its beautiful parks and gardens.

Wilma Unlimited: How Wilma Rudolph Became the World's Fastest Woman by Kathleen Krull

As a young child Wilma Rudolph contracted polio. Her left leg was paralyzed and no one believed she would never walk again. Wilma would not accept this and vowed to walk and even run. Because of her determination, she became the first American woman to earn three gold medals at a single Olympics.

You're On Your Way, Teddy Roosevelt by Judith St. George

As a child, Teddy Roosevelt struggled with asthma. Battling this illness was the major battle of his had a significant impact on his young life. His determination to become strong and healthy established his course for his incredible endeavors to come.

Note: Book descriptions have been adapted from those found for each text at amazon.com

Appendix 3: Materials Created for Unit

This appendix contains the following author created materials:

1. Anchor Chart – Art Observation Norms
2. Anchor Chart – Visual Thinking Skills Questions
3. Art Vocabulary for Word Wall display
4. Graphic Organizer for *On a Beam of Light*
5. Anchor Chart – VTS Questions Modified for Using with Written Text
6. Rubric for Assessing Student Critical Thinking During VTS
7. Student Self-Assessment

Note: These items are not in Times New Roman because I would never use that in my classroom.

When Looking at

ART We:

- Look carefully at the text
- Share what we observe
- Back up our ideas with evidence
- Listen to and consider the views of others

- Discuss multiple possible interpretations

Questions to Ask as
We Look at



- What's going on in this picture?
- What do you see that makes you say that?

- What more can we find?

ART Vocabulary

Abstract - Artwork in which the subject matter is stated in a brief, simplified manner; little or no attempt is made to represent images realistically, and objects are often simplified or distorted.

Acrylics - Quick drying, plastic polymer pigment used with water.

Background - The part of the picture plane that seems to be farthest from the viewer.

Balance - The way in which the elements in visual arts are arranged to create a feeling of equilibrium in an artwork. The three types of balance are symmetry, asymmetry, and radial.

Collage - An artistic composition made of various materials (e.g., paper, cloth, or wood) glued on a surface.

Color - The visual sensation dependent on the reflection or absorption of light from a given surface. The three characteristics of colors are hue, intensity, and value.

Complementary Colors - Colors opposite one another on the color wheel. Red/green, blue/orange, yellow/violet are complementary colors.

Contrast - Differences between two or more elements (e.g., value, color, texture) in a composition; juxtaposition of dissimilar elements in a work of art. Also refers the degree of difference between the lightest and darkest areas of an image.

Cool Colors - Colors suggesting coolness, blues, greens, violets and their variants.

Foreground - Part of a two-dimensional artwork that appears to be nearer the viewer or in the “front” of the image. Middle ground and background are the parts of the picture that appear to be farther and farthest away.

Focal Point -The place in a work of art at which attention becomes focused because of an element emphasized in some way.

Hue - The gradation or attribute of a color that defines its general classification as a red, blue, yellow, green or intermediate color.

Media - (1) Plural of medium referring to materials used to make works of art. (2) Classifications of artworks, such as painting, printmaking, sculpture, film, etc.).

Mixed Media - An artwork in which more than one type of art material is used.

Monochromatic - Use of only one hue or color that can vary in value or intensity.

Mood - The state of mind or emotion communicated in a work of art through color, composition, media, scale, size, etc.

Motif - A repeated pattern, often creating a sense of rhythm.

Negative Space - Shapes or spaces that are or represent the areas unoccupied by objects.

Neutral Colors - Black, white, gray, and variations of brown. They are included in the color family called *earth colors*.

Oils - Oil-based pigment used with paint thinner, turpentine, or other non-water-based suspension.

Pattern - A design, image, or shape repeated in a predictable combination.

Perspective - A system for representing three-dimensional objects viewed in spatial recession on a two-dimensional surface.

Point of View - The angle from which a viewer sees the objects or scene in an image.

Primary Colors - Red, yellow, and blue. From these all other colors are created.

Proportion - The scale relationships of one part to the whole and of one part to another. In images of figures, the appropriate balance between the size of body and its limbs.

Scale - Relative size, proportion; the determination of measurements of dimensions within a design or artwork.

Sculpture - Three-dimensional artwork to be seen either in the round (from all sides) or as a bas-relief (a low relief in which figures protrude only slightly from the background).

Secondary Colors - Colors that are created by the mixture of two primary colors, i.e. red and yellow make orange, yellow and blue make green, blue and red make violet, etc.

Shade - A color produced by the addition of black.

Shape - A two-dimensional area or plane that may be open or closed, free form or geometric. It can be found in nature or created by humans.

Space - The area between, around, above, below, or contained within objects. Spaces are areas defined by the shapes and forms around them and within them, just as shapes and forms are defined by the space around and within them.

Still Life - A specific type of visual artwork representing one or more inanimate object.

Style - A set of characteristics of the art of a culture, a period, or school of art; the characteristic expression of individual artists or groups.

Symmetry - A balance of parts on opposite sides of a perceived midline, giving the appearance of equal visual weight.

Texture - The surface quality of materials, either actual (tactile) or implied (visual).

Three-Dimensional - Having height, width, and depth (3-D).

Tint - A slight or pale coloration; a variation of a color produced by adding white to it and characterized by a low saturation and high lightness.

Tone - Color with gray added to it.

Warm Colors - Colors suggesting warmth, such as reds, yellows, and oranges.

Watercolor - A transparent pigment used with water. Paintings done with this medium are known as *watercolors*.

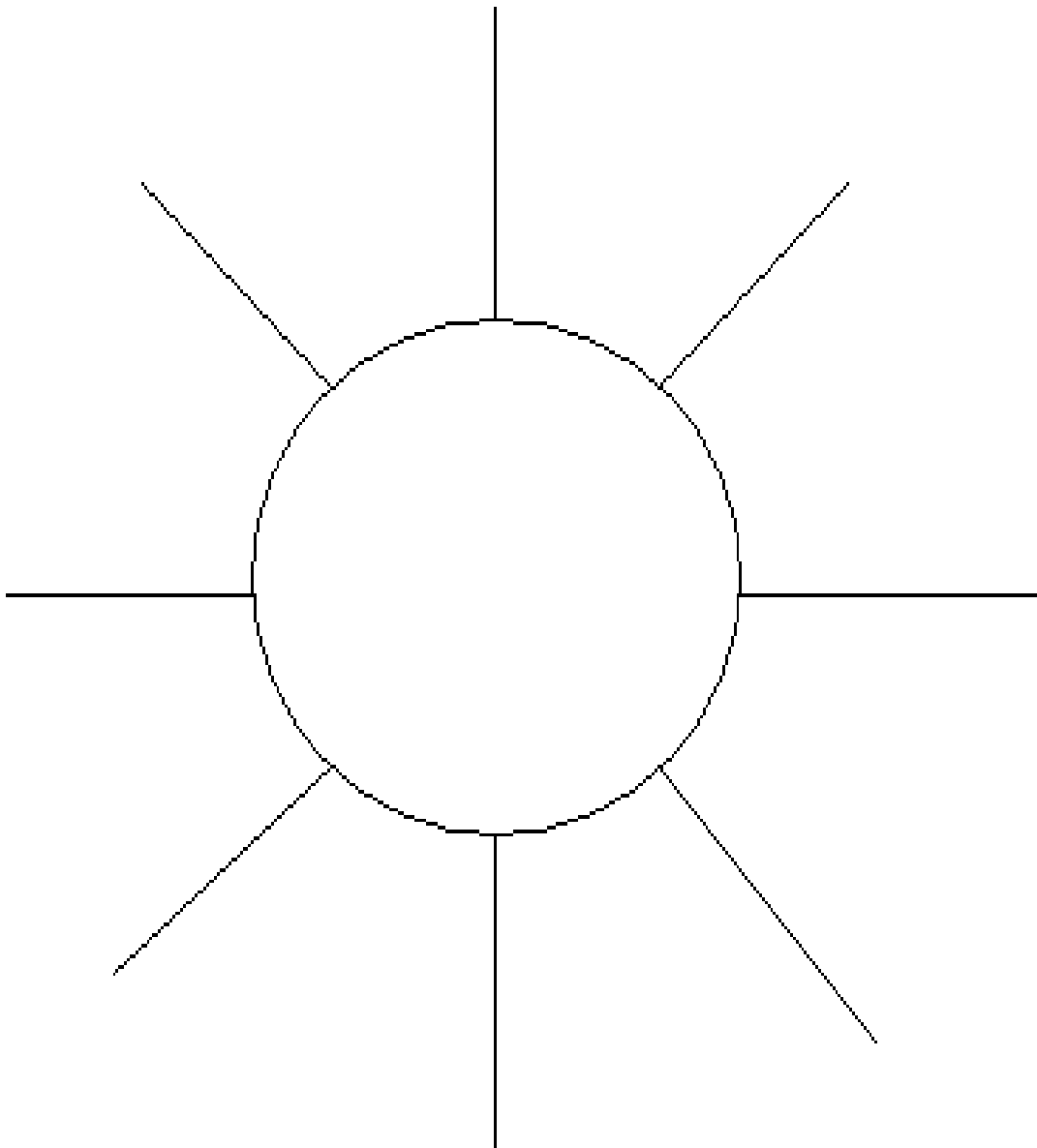
Source: SPARKED – Spark in education. A more extensive arts vocabulary list can be found at

<http://www.kqed.org/assets/pdf/arts/programs/spark/visartvocab.pdf>

Name _____

On a Beam of Light: A Story of Albert Einstein

Written by Jennifer Berne



Questions to Ask Each Other as We

READ

- What's going on in this story?
- What do you read or see that makes you say that?
- What more can we find in both the text and illustrations?

Rubric for Assessing Student Critical Thinking Used During VTS

Student Name _____

Critical Thinking Proficiency	Use Tally	Total
Supported Observation Statement grounded in evidence from text <i>"I think . . . because . . ."</i>		
Educated Conjecture Considering the possibility of something <i>Using conditional language: "might . . . could . . . maybe . . . possibly"</i>		
Modification Changing previously stated opinion <i>"Well . . . instead . . . but"</i>		
Questioning Wondering about something in text <i>"What? . . . Where? . . . Why? . . . How? . . . Who?"</i>		
Elaboration Adds more to comment than initially stated <i>". . . and . . . then . . ."</i>		
Various Possibilities Acknowledging that more than one idea/perspective is reasonable <i>". . . or . . ."</i>		
Responsiveness Actively listening to the perspectives of others and linking ideas <i>"I agree with . . . I respectfully disagree with . . ."</i>		
Total Score		






















Areas of Strength: _____

Areas for Growth: _____

Adapted from a rubric used by the Isabella Stewart Gardner Museum

VTS Student Self-Assessment

Student Name _____

Critical Thinking Proficiency	Rating
Supported Observation Statement grounded in evidence from text <i>"I think . . . because . . ."</i>	  
Educated Conjecture Considering the possibility of something <i>Using conditional language: "might . . . could . . . maybe . . . possibly"</i>	  
Modification Changing previously stated opinion <i>"Well . . . instead . . . but"</i>	  
Questioning Wondering about something in text <i>"What? . . . Where? . . . Why? . . . How? . . . Who?"</i>	  
Elaboration Adds more to comment than initially stated <i>". . . and . . . then . . ."</i>	  
Various Possibilities Acknowledging that more than one idea/perspective is reasonable <i>". . . or . . ."</i>	  
Responsiveness Actively listening to the perspectives of others and linking ideas <i>"I agree with. . . I respectfully disagree with . . ."</i>	  

I'm doing well on: _____

I'd like to work on: _____

Appendix 4: Art Selected for Use with VTS Lessons



Washington Crossing the Delaware
(Courtesy, Metropolitan Museum of Art, New York)

Artist: Emanuel Leutze (American, Schwäbisch Gmünd 1816–1868 Washington, D.C.)

Date: 1851

Medium: Oil on canvas

Dimensions: 149 x 255 in. (378.5 x 647.7 cm)

Classification: Paintings

Credit Line: Gift of John Stewart Kennedy, 1897

Accession Number: 97.34

On view at The Met Fifth Avenue in Gallery 760

Leutze's depiction of Washington's attack on the Hessians at Trenton on December 25, 1776, was a great success in America and in Germany. Leutze began his first version of this subject in 1849. It was damaged in his studio by fire in 1850 and, although restored and acquired by the Bremen Kunsthalle, was again destroyed in a bombing raid in 1942. In 1850, Leutze began this version of the subject, which was placed on exhibition in New York during October of 1851. At this showing Marshall O. Roberts bought the canvas for the then-enormous sum of \$10,000. In 1853, M. Knoedler published an engraving of it. Many studies for the painting exist, as do copies by other artists.

<http://www.metmuseum.org/art/collection/search/11417?sortBy=Relevance&ft=was hington&offset=0&rpp=20&pos=7>



The Old Musician
(Courtesy, National Gallery of Art, Washington)

Artist - Edouard Manet

Artist Info - French, 1832 - 1883

Dated- 1862

Medium - oil on canvas

Classification - Painting

Dimensions - overall: 187.4 x 248.2 cm (73 3/4 x 97 11/16 in.) framed: 238.76 x 297.82 cm (94 x 117 1/4 in.) framed weight: 275 lb.

Credit - Chester Dale Collection

Accession No. - 1963.10.162

Digitization - Direct Digital Capture

Image Use - Open Access

https://images.nga.gov/?service=asset&action=show_zoom_window_popup&language=en&asset=47749&location=grid&asset_list=64005,89640,47749,81203,91016,93000,19892,132906,65138,101240,76066,73086,73054,114514,113897,30847,100926,19016,106273,80367,81260,71970,97858,44267,119906&basket_item_id=undefined



Ute Chief Sevara and Family
(Courtesy, National Gallery of Art, Washington)

Artist - American 19th Century (Detroit Photographic Co.)

Dated - 1899

Medium - photochrom

Classification - Photograph

Dimensions - image: 6 15/16 x 9 in. (17.6 x 22.9 cm)

Credit - Gift of Mary and Dan Solomon

Accession No. - 2006.170.22

Digitization - rapid capture

https://images.nga.gov/?service=asset&action=show_zoom_window_popup&language=en&asset=74120&location=grid&asset_list=110132,139425,19909,83983,43767,62731,95290,74120,63902,51254,62363,91989,120686,62359,19718,62226,63847,105978,91992,60691,118780,62704,114415,95906,61582&basket_item_id=undefined



Tapestry: Les Astronomes, from L'Histoire de l'empereur de la Chine Series
(Courtesy, J. Paul Getty Museum, Los Angeles)

Artist/Maker: Beauvais Manufactory (French, founded 1664) Woven under the direction of Philippe Béhagle (French, 1641 - 1705) After cartoons by Guy-Louis Vernansal (French, 1648 - 1729) and Jean-Baptiste Monnoyer (French, 1636 - 1699) and Jean-Baptiste Belin de Fontenay (French, 1653 - 1715)

Culture: French

Place: Beauvais, France (Place created)

Date: about 1697 - 1705

Medium: Wool and silk; modern cotton lining

Dimensions: 318.8 × 424.2 cm (125 1/2 × 167 in.)

Markings: The border of the tapestry bears the woven coat-of-arms and monogram of Louis-Alexandre de Bourbon, comte de Toulouse and duc de Penthièvre (1678-1737).

Alternate Titles: The Astronomers (Display Title)

The Story of the Emperor of China (Group Title)

Object Number: 83.DD.338

In a tapestry from the set known as The Story of the Emperor of China series, European and Chinese figures assemble on a stone terrace around an elaborately mounted globe. In the center of the group stands the Chinese emperor, wearing the imperial insignia of the winged dragon and gesturing with one hand while the other rests possessively on the globe. The bearded man taking a measurement on the globe with a pair of compasses is the German Jesuit priest Father Schall von Bell, who attained a high rank in the Qing court through his knowledge of Western astronomy. He headed the Imperial Astronomical Bureau and developed a close personal relationship with the emperor, based on a shared interest in mathematics and astronomy.

The large globe, telescope, and the ecliptic armillary sphere on the dragon-shaped base represent actual objects made by the Chinese after European designs. The originals survive today in the observatory in Beijing.

<http://www.getty.edu/art/collection/objects/5806/beauvais-manufactory-woven-under-the-direction-of-philippe-behagle-after-cartoons-by-guy-louis-vernansal-et-al-tapestry-les-astronomes-from-l-histoire-de-l-empereur-de-la-chine-series-french-about-1697-1705/>



The Card Players
(Courtesy, Metropolitan Museum of Art, New York)

Artist: Paul Cézanne (French, Aix-en-Provence 1839–1906 Aix-en-Provence)

Date: 1890–92

Medium: Oil on canvas

Dimensions: 25 3/4 x 32 1/4 in. (65.4 x 81.9 cm)

Classification: Paintings

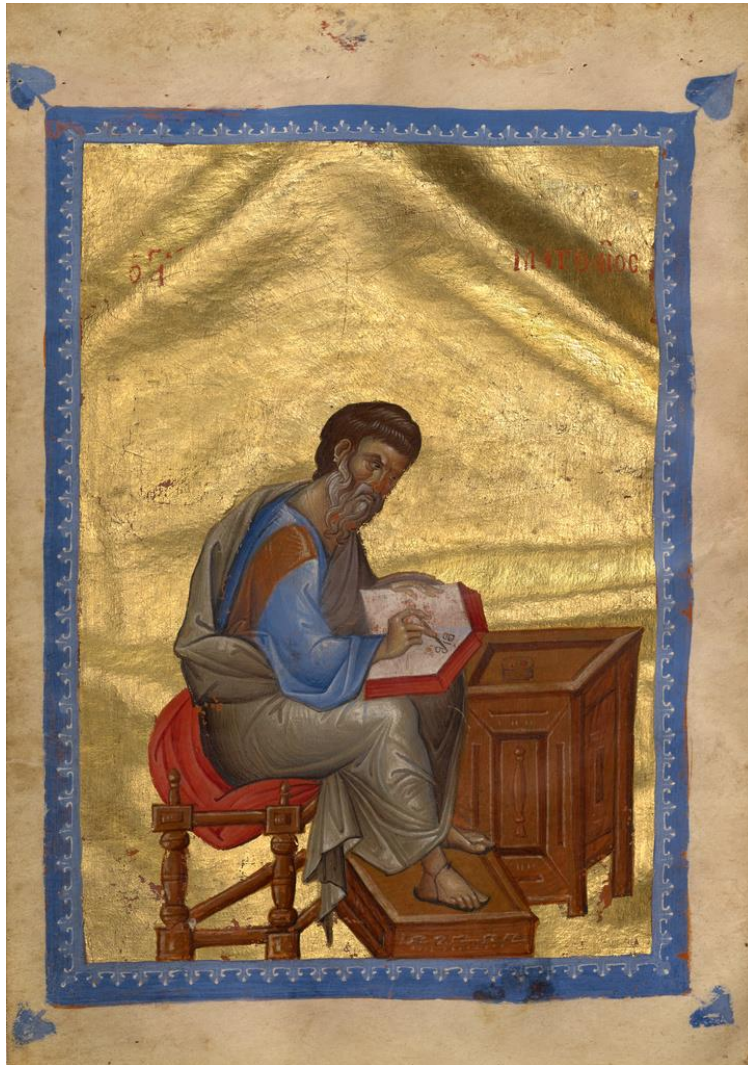
Credit Line: Bequest of Stephen C. Clark, 1960

Accession Number: 61.101.1

On view at The Met Fifth Avenue in Gallery 826

This is probably the first in a series of five paintings that Cézanne devoted to peasants playing cards. Enlisting local farmhands to serve as models, he may have drawn inspiration for his genre scene from a seventeenth-century painting by the Le Nain brothers in the museum in his hometown of Aix.

<http://www.metmuseum.org/art/collection/search/435868?sortBy=Relevance&ft=cezanne&offset=0&rpp=20&pos=2>



Gospel Book
(Courtesy, J. Paul Getty Museum, Los Angeles)

Artist/Maker: Unknown

Culture: Byzantine

Place: Constantinople, Turkey (Place created)

Date: late 13th century

Medium: Tempera colors, gold leaf, gold ink, and ink on parchment bound in a modern limp vellum binding

Dimensions: Leaf: 21 × 14.9 cm (8 1/4 × 5 7/8 in.)

<http://www.getty.edu/art/collection/objects/123513/unknown-maker-gospel-book-byzantine-late-13th-century/>



Girl with a Hoop
(Courtesy, National Gallery of Art, Washington)

Artist - Auguste Renoir

Artist Info - French, 1841 - 1919

Dated - 1885

Medium - oil on canvas

Classification - Painting

Dimensions - overall: 125.7 x 76.6 cm (49 1/2 x 30 3/16 in.) framed: 148 x 100.6 cm (58 1/4 x 39 5/8 in.)

Credit - Chester Dale Collection

Accession No. - 1963.10.58

Image Use - Open Access

https://images.nga.gov/?service=asset&action=show_zoom_window_popup&language=en&asset=110853&location=grid&asset_list=38226,106706,38150,40302,46337,35780,38149,110942,103103,78378,98562,76470,105097,118112,77766,119370,119292,97558,76469,58270,110932,113903,62184,110853,104197&basket_item_id=undefined

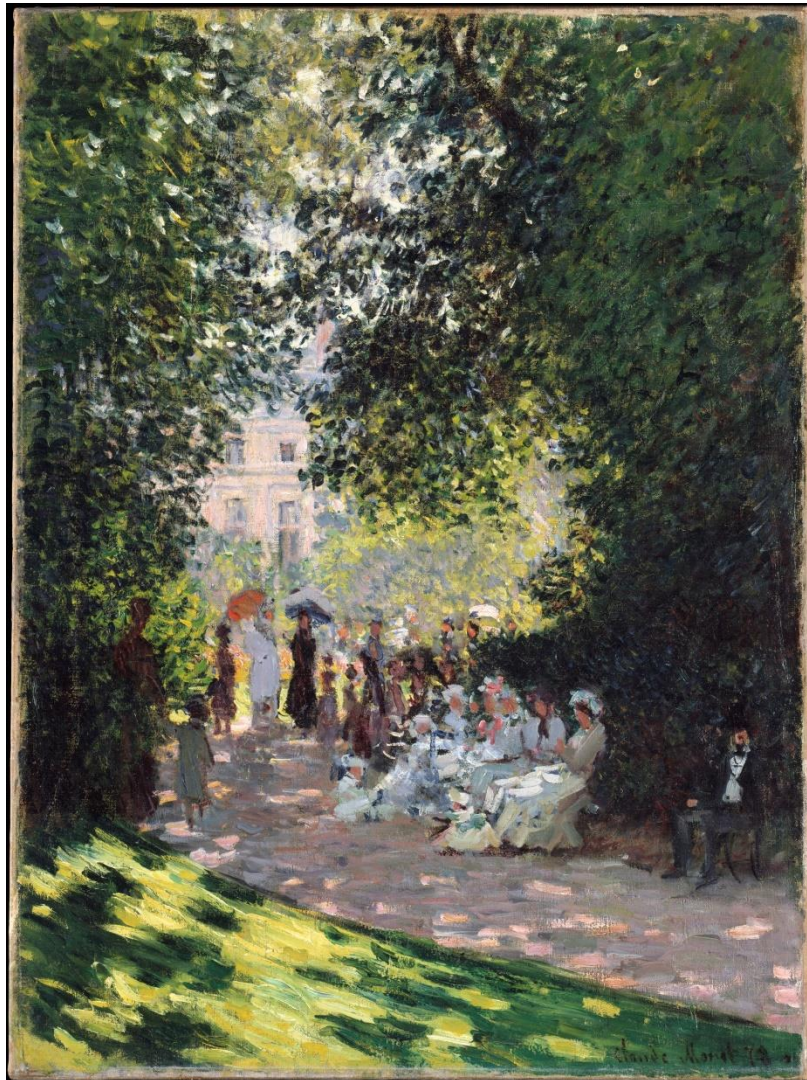


Terracotta amphora (jar)
(Courtesy, Metropolitan Museum of Art, New York)

Attributed to the Berlin Painter
Period: Late Archaic
Date: ca. 490 B.C.
Culture: Greek, Attic
Medium: Terracotta; red-figure
Dimensions: H. 16 5/16 in. (41.50 cm)
Classification: Vases
Credit Line: Fletcher Fund, 1956
Accession Number: 56.171.38
On view at The Met Fifth Avenue in Gallery 157
Obverse, young man singing and playing the kithara
Reverse, judge

This work is a masterpiece of Greek vase-painting because it brings together many features of Athenian culture in an artistic expression of the highest quality. The shape itself is central to the effect. Through the symmetry, scale, and luminously glossy glaze on the obverse, it offers a carefully composed three-dimensional surface that endows the subject with volume. The identity of the singer is given by his instrument, the kithara, which was a type of lyre used in public performances, including recitations of epic poetry. The figure on the reverse is identified by his garb and wand. While the situation is probably a competition, the subject is the music itself. It transports the performer, determines his pose, and causes the cloth below the instrument to sway gently.

<http://www.metmuseum.org/art/collection/search/254896?sortBy=Relevance&ft=greek+terracotta&offset=0&rpp=20&pos=18>



The Parc Monceau
(Courtesy, Metropolitan Museum of Art, New York)

Artist: Claude Monet (French, Paris 1840–1926 Giverny)

Date: 1878

Medium: Oil on canvas

Dimensions: 28 5/8 x 21 3/8 in. (72.7 x 54.3 cm)

Classification: Paintings

Credit Line: The Mr. and Mrs. Henry Ittleson Jr. Purchase Fund, 1959

Accession Number: 59.142

Monet painted six views of the Parc Monceau: three in 1876 and three in 1878. In this canvas, the disposition of light and shade in the foreground, the patterns of the leaves, and the broad contours beginning to develop in areas of strong contrast suggest that Monet had already begun to experiment with the boldly two-dimensional motifs that would characterize his work of the 1880s and 1890s.

<http://www.metmuseum.org/art/collection/search/437108?sortBy=Relevance&ft=clade+monet&offset=4&rpp=20&pos=21>

Notes

1. "Welcome to the Caldecott Medal Home Page." The American Library Association.
2. Herman, Amy. *Visual Intelligence: Sharpen Your Perception, Change Your Life*, Introduction xx
3. Walker, Tim. "The Good and Bad News About Arts Education in U.S. Schools." NEA Today.
4. "Arts-Infused Inquiry Based Learning." Lilly Sarah Grace.
5. Lubbock, John. *The Beauties of Nature and the Wonders of the World We Live in*.
6. Herman, Amy. *Visual Intelligence: Sharpen Your Perception, Change Your Life*, 6-10
7. Shapiro, Ari. "Why An Art Historian Took NYPD Officers To The Met." NPR: National Public Radio. May 18, 2016.
8. Herman, Amy. *Visual Intelligence: Sharpen Your Perception, Change Your Life*. New York: Houghton Mifflin Harcourt, 2016.
9. Eilam, Billie. *Teaching, Learning, and Visual Literacy: The Dual Role of Visual Representation*, Preface xix
10. Ibid, 26-36.
11. Sinatra, Richard. *Visual Literacy Connections to Thinking, Reading, and Writing*, 5
12. Sinatra, Richard. *Visual Literacy Connections to Thinking, Reading, and Writing*.
13. Serafini, Frank. "Expanding Perspectives for Comprehending Visual Images in Multimodal Texts." *Journal of Adolescent & Adult Literacy* 54, no. 5
14. Youngblood, Teresa. "Case in Point 20. Paying Attention to Images." p.201-211. *Literacy Instruction for Today's Classroom: Implementing Strategies Based on 20 Scholars and Their Ideas*.
15. "Aesthetic Development." Visual Thinking Strategies.
16. Cary, Brainard. "Philip Yenawine". *Lives of the Most Excellent Artists, Curators, Architects, Critics and More*. Podcast audio, Dec.15,2015.
17. Ibid.

18. Yenawine, Philip. "Guidelines for Image Selection for Beginning Viewers." Visual Thinking Strategies.
19. Housen, Abigail, and Philip Yenawine. "Visual Thinking Strategies: Understanding the Basics." Visual Thinking Strategies.
20. "Summary of the Visual Thinking Strategies Grades K-5 Curriculum." Visual Thinking Strategies.
21. Lawson, Christopher. Interview with author.
22. Housen, Abigail, and Philip Yenawine. "Visual Thinking Strategies: Understanding the Basics." Visual Thinking Strategies.
23. Grohe, Michelle, and Sara Egan. "School Partnership Program 2010-14 Elementary Longitudinal Case Study Final Report." Isabella Stewart Gardner Museum. December 15, 2015.
24. Tishman, Shari. "MoMA's Visual Thinking Curriculum Project." Project Zero.
25. "Summaries of Selected VTS Research." Visual Thinking Strategies.
26. Stamburg, Susan. "Artist David Hockney Says The Drive To Create Pictures 'Is Deep Within Us'" NPR - Morning Edition. October 13, 2016.

Bibliography

"Aesthetic Development." Visual Thinking Strategies. Accessed September 10, 2016.
<http://www.vtshome.org/research/aesthetic-development> .

This page on the Research links of the Visual Thinking Strategies site provides an easy to understand breakdown of Abigail Housen's stage theory for the aesthetic stages of viewing art.

"Arts-Infused Inquiry Based Learning." Lilly Sarah Grace. Accessed September 9, 2016.
<http://lilysarahgrace.org/what-we-do#aibl>.

This page of the Lilly Sarah Grace website explains Arts-Infused Inquiry Based Learning (AIIBL) and its connection to Common Core State Standards.

Beauvais Manufactory (France) - Woven under the direction of Philippe Béhagle. 1697-1705. *Les Astronomes*, from *L'Histoire de l'empereur de la Chine* Series. Tapestry: Wool and silk; modern cotton lining. Los Angeles: J. Paul Getty Museum.

Art example used for VTS lessons with students. This piece provides an example of artistic expression in a varied medium (tapestry), from a different time (16th/17th century), and from and of a different culture (made in France, representing China).

The Berlin Painter (attributed to). 490 B.C. *Terracotta amphora (jar)*. Terracotta; red-figure. New York: Metropolitan Museum of Art.

Art example used for VTS lessons with students. Provides example of artistic expression in a varied medium (terracotta – utilitarian item, jar), from a different time (490 B.C.), and from a different culture (ancient Greek).

Brown, Margaret Wise. *The Important Book*. New York, NY: Harper Collins Publishers, 1949 (renewed 1977).

This is the mentor text that I used to help students use what they know about lists to communicate what they feel is important about themselves.

Cary, Brainard. "Philip Yenawine". *Lives of the Most Excellent Artists, Curators, Architects, Critics and More*. Podcast audio, Dec.15,2015.
<http://museumofnonvisibleart.com/interviews/philip-yenawine/> .

In this podcast interview of Philp Yenawine by Yale University Radio (WYBCX), Yenawine walks listeners through the early development of VTS and describes its implementation in museum education programs today. I found it a fascinating piece from the perspective of an initial innovator.

Cézanne, Paul. 1890-1892. *The Card Players*. Oil on canvas. New York: Metropolitan Museum of Art.

Art example used for VTS lessons with students. This piece provides example of artistic expression by a renowned artist using a less known artifact.

Detroit Photographic Company (American 19th Century). 1899. *Ute Chief Sevara and Family*. Photochrom. Washington: National Gallery of Art.

Art example used for VTS lessons with students. Provides example of artistic expression in a varied medium (photograph) that students might not at first look define as art.

Educational Videos for Kids. "Pablo Picasso. Brief Biography and Paintings. Great for Kids and ESL." You Tube. April 14, 2016. Accessed October 27, 2016.

This 4:55 minute video has excellent simplified content and claims to be for students. However, there is a short portion from 2:49-3:04 that shows his abstract nudes. In my own classroom, I will be prepared to forward through this 15 seconds so that the most appropriate content is delivered to my students.

Eilam, Billie. *Teaching, Learning, and Visual Literacy: The Dual Role of Visual Representation*. New York, NY: Cambridge University Press, 2012.

This book is a study of the visual representations commonly found within a school setting. In it, the author details the gains in student understanding when educators are intentional about the use of these items in their instruction. She contends that they are an essential element in the development of student literacy.

"English Language Arts Standards » Reading: Literature » Grade 3." Common Core State Standards Initiative. Accessed September 14, 2016. <http://www.corestandards.org/ELA-Literacy/RL/3/>.

This page from the Common Core State Standards Initiative website provides the specifics of third grade English Language Arts standards for reading literature.

"English Language Arts Standards » Speaking & Listening » Grade 3." Common Core State Standards Initiative. Accessed September 14, 2016. <http://www.corestandards.org/ELA-Literacy/SL/3/>.

This page from the Common Core State Standards Initiative website provides the specifics of third grade English Language Arts standards for speaking and listening.

"English Language Arts Standards » Writing » Grade 3." Common Core State Standards Initiative. Accessed September 14, 2016. <http://www.corestandards.org/ELA-Literacy/W/3/>.

This page from the Common Core State Standards Initiative website provides the specifics of third grade English Language Arts standards for writing.

Grohe, Michelle, and Sara Egan. "School Partnership Program 2010-14 Elementary Longitudinal Case Study Final Report." Isabella Stewart Gardner Museum. December 15, 2015. Accessed September 10, 2016. <http://www.gardnermuseum.org/FILE/6153.pdf>.

This report provides details of the partnership between the Isabella Stewart Gardner Museum and local Boston public elementary schools. It describes the findings of their 3-

year research study, *Thinking Through Art*, which was funded by a U.S. Department of Education grant to study the work they were doing with these students. It highlights the gains in students' aesthetic development and critical thinking skills when VTS is implemented.

Herman, Amy E. "How Art Can Help You Analyze." TED Ed Lessons Worth Sharing. Accessed August 14, 2016. <http://ed.ted.com/lessons/how-art-can-help-you-analyze-amy-e-herman>.

This is a great five-minute TED-Ed video Amy Herman explains why art historical training can prepare you for real world investigation and can enhance your communication and analytical skills.

Herman, Amy. *Visual Intelligence: Sharpen Your Perception, Change Your Life*. New York: Houghton Mifflin Harcourt, 2016.

This book began my fascination with finding out more about VTS. In it, Herman puts her own spin on the process, as she describes the training that she provides for a broad range of professionals in developing visual intelligence. It is an accessible and stimulating read.

Herman, Amy E., and Jordan Harbinger. "Visual Intelligence (Episode 524)." *The Art of Charm*. Accessed September 24, 2016. <http://theartofcharm.com/podcast-episodes/amy-herman-visual-intelligence-episode-524/>.

Fascinating 56-minute Art of Charm podcast in which Amy Herman is interviewed about her book, *Visual Intelligence*, and "The Art of Perception," a course she developed to help a wide array of professionals improve vital observation and communication skills through an examination of art.

Housen, Abigail, and Philip Yenawine. "Visual Thinking Strategies: Understanding the Basics." *Visual Thinking Strategies*. Accessed August 8, 2016. <http://d3djho760a7v12.cloudfront.net/research/articles-other-readings>.

This 10-page PDF explains the basic principles of VTS methods. Topic headings include: Asking Questions, Acknowledging Responses, Linking Thoughts, Answering (Student) Questions, Timing, Closure, Developing Connections to Other Classes, and Class Size. I found it an essential guide as I implemented this new strategy.

Lawson, Christopher. Interview. August 16, 2016.

Mr. Lawson is the current COO of the Bechtler Museum of Modern art in Charlotte, North Carolina. His training is in arts education. He has trained educators around the country in how to utilize the VTS model in their classrooms. He additionally trains doctors at our regional hospitals to use VTS strategies in their practice. My time with him provided me with valuable guidance, resources, and confidence needed to implement this strategy with my own students.

Leutze, Emanuel. 1851. *Washington Crossing the Delaware*. Oil on canvas. New York: Metropolitan Museum of Art.

Art example used for VTS lessons with students. This piece provides an example of artistic expression using a well-recognized cultural artifact. This piece is the first in the series of lessons and was selected because of its strong narrative quality and recognizable images.

Lubbock, John. *The Beauties of Nature and the Wonders of the World We Live in*. New York, NY: MacMillan and Company, 1898.

This text provides a historical perspective on ways of looking. Used for a short quote.

Manet, Edouard. 1862. *The Old Musician*. Oil on canvas. Washington: National Gallery of Art.

Art example used for VTS lessons with students. This piece provides an example of artistic expression by a renowned artist using a less known artifact.

Monet, Claude. 1878. *The Parc Monceau*. Oil on canvas. New York: Metropolitan Museum of Art.

Art example used for VTS lessons with students. This piece provides an example of artistic expression by a prominent artist. This piece is the last in the series of lessons and was chosen for its more abstract representation of image.

"North Carolina Essential Standards Third Grade Social Studies." Public Schools of North Carolina - Department of Public Instruction. Accessed September 12, 2016.
<http://www.dpi.state.nc.us/docs/curriculum/socialstudies/scos/3-5.pdf>.

This page from the North Carolina Department of Public instruction website provides the specifics of third grade Social Studies standards.

"North Carolina Essential Standards Third Grade Visual Arts." Public Schools of North Carolina - Department of Public Instruction. Accessed September 12, 2016.
<http://www.dpi.state.nc.us/docs/curriculum/artsed/scos/new-standards/arts/visual/k-8.pdf>

This page from the North Carolina Department of Public instruction website provides the specifics of third grade Visual Arts standards.

Renoir, Auguste. 1885. *Girl with a Hoop*. Oil on canvas. Washington: National Gallery of Art.

Art example used for VTS lessons with students. This piece provides an example of artistic expression by a renowned artist using a less known artifact.

Serafini, Frank. "Expanding Perspectives for Comprehending Visual Images in Multimodal Texts." *Journal of Adolescent & Adult Literacy* 54, no. 5 (February 2011): 342-50. doi:10.1598/jaal.54.5.4.

In this article, the author argues that in today's world of visual bombardment, educators must include multiple modes of visual instruction to help students make connections with the complexity of their multifaceted texts.

Shapiro, Ari. "Why An Art Historian Took NYPD Officers To The Met." NPR: National Public Radio. May 18, 2016. Accessed September 24, 2016.

<http://www.npr.org/2016/05/18/478571229/why-an-art-historian-took-nypd-officers-to-the-met>.

This is a five-minute long NPR segment about and interview with Amy Herman. It is an introduction to her program to develop visual perception skills through a systematic examination of art and details how it has been effective in training New York City police officers.

Sinatra, Richard. *Visual Literacy Connections to Thinking, Reading, and Writing*. Springfield, IL: Charles C Thomas, 1986.

This author looks at visual literacy through a developmental lens and describes it as a foundational building block of all literacy understanding. He argues that visual literacy remains a vital component of literate understanding even after the development of reading literacy.

"SPARKED - Spark in Education Visual Arts Vocabulary." KQED Public Media for Northern California. Accessed October 29, 2016.

<http://www.kqed.org/assets/pdf/arts/programs/spark/visartvocab.pdf>.

SparkEd is the education and outreach program of Spark (a television show, educational outreach program and website from KQED). Here I found arts education tools to help K-12 educators use in the classroom. This specific link is for a listing of art vocabulary terms and their definitions.

Stamburg, Susan. "Artist David Hockney Says the Drive To Create Pictures 'Is Deep Within Us'" NPR - Morning Edition. October 13, 2016. Accessed October 13, 2016.

<http://www.npr.org/programs/morning-edition/2016/10/13/497768197/morning-edition-for-october-13-2016>.

This is a seven-minute interview with David Hockney, a British-born artist, who has produced work in almost every medium and was a pioneer of the British Pop Art movement in the early 1960s. In this reflection, he describes the connection we make with the visual world and the way this connection informs our understanding.

"Summaries of Selected VTS Research." Visual Thinking Strategies. Accessed August 8, 2016. <http://www.vtshome.org/research/research-studies>.

This page on the Research links of the Visual Thinking Strategies site provides four synopses of key research study findings about the benefits of Visual Thinking Strategies education programs. Full reports are downloadable. An additional twenty links provide information about additional research that conducted around the world on this topic.

"Summary of the Visual Thinking Strategies Grades K-5 Curriculum." Visual Thinking Strategies. Accessed August 8, 2016.

<http://d3djho760a7v12.cloudfront.net/research/articles-other-readings>.

This PDF is found on the "Articles and Other Readings" page on the Research links of the Visual Thinking Strategies site. It provided a brief overview of the K-5 VTS curriculum and strategies for a three-year implementation. The intent is to offer details of their for-purchase 10-lesson packaged curriculum. Despite this, I found it to be a helpful guide to the different grade level goals and procedures.

Tishman, Shari. "MoMA's Visual Thinking Curriculum Project." Project Zero. Accessed October 11, 2016. <http://www.pz.harvard.edu/projects/momas-visual-thinking-curriculum-project>.

This page provides highlights of the research findings by researchers at Project Zero in their year-long investigation of VTS as implemented by the Museum of Modern Art in New York schools.

Unknown Byzantine artist. Late 13th century. *Gospel Book*. Tempera colors, gold leaf, gold ink, and ink on parchment bound in a modern limp vellum binding. Los Angeles: J. Paul Getty Museum.

Art example used for VTS lessons with students. Provides example of artistic expression in a varied medium (gold leaf and tempera colors in a book), from a different time (13th century), and from a different culture (Byzantine).

Walker, Tim. "The Good and Bad News About Arts Education in U.S. Schools." NEA Today. April 5, 2012. Accessed September 14, 2016. <http://neatoday.org/2012/04/05/the-good-and-bad-news-about-arts-education-in-u-s-schools-2/>.

This article was written in response to U.S. Department of Education report on the state of arts education in America's schools. It states that teaching the arts and humanities are vital to students' academic success.

"Welcome to the Caldecott Medal Home Page." The American Library Association. Accessed September 14, 2016.

<http://www.ala.org/alsc/awardsgrants/bookmedia/caldecottmedal/caldecottmedal>.

This page provides a brief history of the Caldecott medal as well as a listing of awarded books over the years. Used for a short quote.

Yenawine, Philip. "Guidelines for Image Selection for Beginning Viewers." Visual Thinking Strategies. Accessed August 8, 2016.

<http://d3djho760a7v12.cloudfront.net/research/articles-other-readings>.

This document outlines the best practices for image selections and explains that choosing objects to introduce beginning viewers to art should be as thoughtful a process as choosing literature to engage readers.

Youngblood, Teresa. *Literacy Instruction for Today's Classroom: Implementing Strategies Based on 20 Scholars and Their Ideas*. Compiled by Susan Nelson Wood, Sharilyn C. Steadman, and John S. Simmons. Norwood, MA: Christopher-Gordon Publishers, 2010.

In the last chapter of this book, Youngblood proposes that the vast array of digital resources available to and utilized by students today makes it necessary for educators to help students become fluent in multiple literacies.