Integrating Art Into the Classroom: A Necessary Component of a Well-Rounded Education

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INTEGRATING ART INTO THE CLASSROOM:
A NECESSARY COMPONENT OF A WELL-ROUNDED EDUCATION

A Capstone Project Presented in Partial Fulfillment
of the Requirements for the Degrees Bachelor of Science and Bachelor of Arts
with Honors College Graduate Distinction at
Western Kentucky University

By
Kate M. Latham
May 2017

*****

CE/T Committee:
Professor Janet Tassell, Ph.D., Chair
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I dedicate this thesis to all of the educators in my life - elementary, middle, high school, and undergraduate teachers - who pushed me to learn and to grow. Thank you all for inspiring me to do the same for the future generations of students. I also dedicate this work to my friends and family who supported me immensely throughout the undergraduate journey and during the writing process. Lastly, I dedicate this thesis to my NawNaw, whose love for others and enthusiasm for life will never be forgotten.
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This project would not have been possible without the support of my CE/T advisor, Dr. Janet Tassell. I would like to thank her for encouraging me when I had lost motivation and instructing me on how to stretch out of my comfort zone to create a better project. She supported me with love and kindness even when I least deserved it. A huge thank you also goes to Rachel Leer, who patiently served on my committee and provided feedback and encouragement at the most critical times.

I would like to thank WKU for the opportunities that have been presented to me as a student. Each experience at WKU has given me the skills and confidence necessary not only to complete this thesis, but also to go forth and teach the young citizens of our community. Additionally, I would like to thank the community of scholars and friends I have made during my time in the Honors College, both my peers and professors have been supportive and encouraging throughout the process.

I would like to thank my family for their love and support not only during this project, but throughout my whole life. Without my parents, grandparents, brothers, sisters, and cousins as examples to look up to it would be much harder to imagine success. Lastly, I would like to specifically thank my mom for always encouraging me to go and do hard things. She has taught me that without struggle and without difficulty we cannot grow. She has blessed me through her encouragement with a thirst of knowledge and a desire to make a difference in the world.
This thesis includes a combination of research and visual arts integration lesson plans. Research covers the benefits of exposure to the visual. Lesson plans were specifically designed for the core content area subjects: English/language arts, mathematics, science, and social studies. Each of these lessons was designed to meet local and national standards for the core content area and for visual arts. Additionally, each lesson plan includes a component of art production. This thesis can be utilized by a variety of individuals, including educators who strive to incorporate art into their classrooms. The research aspect can be utilized by those struggling to communicate the importance of art and will give arguments for the retention of visual art in schools, and other organizations.
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CHAPTER I

Introduction

Throughout a student’s educational career a variety of subjects and information will be presented to them. Standards are created in order to ensure each student receives a complete and appropriate education. As explained on the Common Core website, standards “provide teachers, parents, and students with a set of clear expectations to ensure that all students have the skills and knowledge necessary to succeed in college, career, and life upon graduation from high school” (Common Core State Standards Initiative, 2017, “Why are the Common Core State Standards Important?”, para. 1). The integration of art into the classroom can be used to strengthen existing teaching practices and engage students in the learning process.

Not only is this practice necessary to allow students to gain those educational benefits, but it is also necessary to introduce art to students who could excel in the subject, possibly leading them to their future careers. According to a report by the National Endowment for the Arts, artistic careers for painters, architects, and photographers are expected to increase by 11 percent by 2018, compared to the projected 10 percent total increase in the American labor force (Bradford, 2011). Not everyone will go into the art profession, but everyone will use the creativity and problem solving skills gained through art education throughout their lifetime. Educators should make it a goal to encourage the development and use of these skills.

For those schools that are privileged to have an art program in place, integrating art into core curriculum classes will aid in the development of skills necessary for all students to understand and communicate through visual information. Jane Fung, a
National Board Certified Teacher in urban Los Angeles (2013), has said, “Art is particularly powerful when it allows students to communicate learning when they cannot express it through writing. . . Their work provides evidence that they were able to effectively communicate with each other to understand and complete the assignment” (para. 5). The integration of art into the classroom can be used to strengthen existing teaching practices and engage students in the learning process. For those schools that do not have an art program, teachers can incorporate art into their curriculum to maintain exposure to art and the benefits art provides.

**Statement of the Problem**

Art is a critical component of a well-rounded education; however, art education classes are threatened by budget cuts, which lessen the availability of art classes for students. According to a comprehensive study of 66 of the nation's big-city school districts by the Council of the Great City Schools, students spend 20 to 25 hours taking standardized tests every year (Layton, 2015). The more schools push toward practices that tend to standardize, the more students need the kind of experiences and opportunities that the arts can provide. Many scholars, such as Franco and Unrath (2014), Fung (2013), and Riley (2012) argue the importance of keeping art classes in schools because of the benefits the arts offer. Integrating art will benefit all students for a variety of reasons.

The best outcome for art education would be that every student is introduced to art through a designated classroom with a specialized instructor. A specialized instructor, someone who has majored in Art Education or something very similar, is qualified to teach art and better able to foster students’ artistic abilities. A class devoted solely to art focuses on knowledge of the history of art, as well as art production and artistic methods.
While the use of this practice is ideal, art education classes have faced cuts and are no longer as prevalent in schools. Budget cuts paired with an increased focus on reading and math have had a clear effect on the availability of arts instruction (Walker, 2012). However, there are ways to combat the loss of art classes to retain some of the benefits that art provides students.

Research Questions

In this thesis, the benefits of exposure to the visual arts will be explored, as well as ways to communicate the importance of art and a visual arts education. Additionally, lesson plans will be created to demonstrate ways to integrate visual arts into the core subjects including: English/language arts, mathematics, science, and social studies.

Two questions have been developed in order to guide this research:

1. How can one integrate visual arts into a general education classroom, specifically through standards alignment, teaching strategies, and student assessment?
2. What resources are available for teachers looking to begin the process of visual arts integration?

Summary

Integrating visual art into the general education classroom is useful for differentiating instruction in order to expose students to a variety of educational benefits. Not only does this practice allow students to gain those educational benefits, but it is also necessary to encourage the development of and use of creativity and problem solving skills, which will be used throughout a student’s lifetime. Because integration can be used to strengthen existing teaching practices and engage students in the learning process, it is beneficial for all classrooms. This thesis is a compilation of research about the
benefits of integration and a selection of lessons with an emphasis on visual arts integration.

The coming chapters include research in the form of a Theoretical Framework and a Review of the Literature, as well as a series of twelve lesson plans. The Theoretical Framework focuses on two of the theories that will have an impact on understanding the teaching approaches presented within this thesis. The theories featured include Gardner’s Theory of Multiple Intelligences and Bloom’s Taxonomy. The Theoretical Framework outlines how each of these theories can be applied to arts integration as well as how they can influence the way teachers deliver instruction in a classroom utilizing integration. The Review of the Literature evaluates the state of the arts and outlines research concerning standards alignment, teaching strategies, and student assessment. The final four chapters are each composed of three lesson plans. Each chapter is devoted to a specific content area: English/language arts, mathematics, science, or social studies. Within each chapter, there is one lesson plan for each of the following grades: first, third, and fifth. Throughout these chapters, this thesis attempts to provide the means through which to explain and rationalize the benefits of a visual arts education for all students.
CHAPTER II

Introduction

Chapter II is composed of research in the form of a Theoretical Framework and a Review of the Literature. The Theoretical Framework focuses on two of the theories that will have an impact on understanding the teaching approaches presented within this thesis. The theories featured include Gardner’s Theory of Multiple Intelligences and Bloom’s Taxonomy. The Theoretical Framework outlines how each of these theories can be applied to arts integration as well as how they can influence the way teachers deliver instruction in a classroom utilizing integration. The Review of the Literature evaluates the state of the arts and outlines research concerning standards alignment, teaching strategies, and student assessment.

Theoretical Framework

In order to successfully implement integration, educators must evaluate which teaching approaches will be the most useful when choosing how to deliver instruction within the classroom. Two of the theories that will have an impact on the teaching approaches include Gardener’s Theory of Multiple Intelligences and Bloom’s Taxonomy. Gardner’s Theory of Multiple Intelligences revolves around the idea that “human beings have a number of relatively discrete intellectual capacities” (Gardner, 2013, p. 2). Bloom’s Taxonomy, “is a convenient way to describe the degree to which we want our students to understand and use concepts, to demonstrate particular skills, and to have their values, attitudes, and interests affected” (The University of North Carolina at Charlotte, 2017, para. 5). Both of these theories can be applied to arts integration and can influence how teachers deliver instruction in a classroom utilizing integration. The John
F. Kennedy Center for the Performing Arts (2010) describes integration as an approach to teaching that is “grounded in the belief that learning is actively built, experiential, evolving, collaborative, problem-solving, and reflective” (p. 2). By understanding how Gardner’s Theory of Multiple Intelligences and Bloom’s Taxonomy impact student learning, educators are better able to cater lessons to meet the needs of all students. Paired with research covering how one can integrate visual arts into a general education classroom, specifically though standards alignment, teaching strategies, and student assessment, these two theories are paramount to successfully integrating visual art into the general education classroom.

**Gardner’s Theory of Multiple Intelligences**

The Theory of Multiple Intelligences has revolutionized how we understand intelligence and student ability. The Theory of Multiple Intelligences was first proposed by Howard Gardner in 1983 in the book *Frames of Mind: The Theory of Multiple Intelligences* which has since been revamped and updated (2011). As explained by Gardner, the Theory of Multiple Intelligences is:

A critique of the standard psychological view of intellect: that there is a single intelligence, adequately measured by IQ or other short answer tests. Instead, on the basis of evidence from disparate sources, I claim that human beings have a number of relatively discrete intellectual capacities (Gardner, 2013, p. 1-2).

Because Gardner’s theory is based wholly on empirical evidence drawn from psychology, brain science, anthropology, genetics, and other disciplines, it is constantly changing and evolving (Gardner, 1995, p. 203). There were seven original intelligences proposed by Gardner, which has since been expanded to include three additional
intelligences. The original intelligences include: verbal-linguistic, logical-mathematical, visual-spatial, musical, bodily-kinesthetic, interpersonal, and intrapersonal (George Lucas Educational Foundation, 2017). Naturalistic which was not included in the original list was later added in 1995 (Gardner, 1995). A spiritual intelligence and an existential intelligence have also been considered, although they are not widely accepted (Smith, 2008).

The Theory of Multiple Intelligences is important in that it highlights the idea that students learn in different ways. If a student does not understand the material presented, it does not necessarily mean he/she is unintelligent. The Theory of Multiple Intelligences suggests that it could mean the information needs to be presented differently for the student to understand; this component has been coined “individuation.” Gardner has argued:

As much as possible we should teach individuals in ways that they can learn and we should assess them in a way that allows them to show what they have understood and to apply their knowledge and skills in unfamiliar contexts (Gardner, 2013, p. 3).

The Theory of Multiple Intelligences explains that to ensure all students have access to learning, content should be presented in several ways; this component has been coined pluralization. Gardner explains, “Whether you are teaching the arts, the sciences, history, or math, you should decide which ideas are truly important and then you should present them in multiple ways” (Gardner, 2013, p. 3). What purpose does the Theory of Multiple Intelligences serve? As explained by Gardner, the intelligences should be not be used as a way of separating people into categories, but rather as a way to help students learn useful
content (Gardner, 2013). By understanding the implications of the Theory of Multiple Intelligences, educators are better able to present information to students in a way that will encourage learning and retention.

**Bloom’s Taxonomy**

Knowledge of Bloom’s Taxonomy is essential if one plans to assess learning in the classroom. Bloom’s Taxonomy is a result of discussions between Benjamin Bloom and a group of colleagues with the American Psychological Association that led to the taxonomy of educational goals (The University of Chicago Chronicle, 1999). Bloom’s Taxonomy is one of the most widely used ways of organizing levels of expertise. The taxonomy is divided into three domains: cognitive, affective, and psychomotor (Seaman, 2011, p. 30). Howard Bloom has stated that the main focus of the taxonomy was originally curriculum and assessment. “This taxonomy is designed to be a classification of the student behaviors which represent the intended outcomes of the educational process” (as cited in Seaman, 2011, p. 33).

The original framework consisted of six major categories: Knowledge, Comprehension, Application, Analysis, Synthesis, and Evaluation. As explained by Armstrong (2017), “the categories after Knowledge were presented as ‘skills and abilities,’ with the understanding that knowledge was the necessary precondition for putting these skills and abilities into practice” (Background Information section, para. 3).

Bloom’s Taxonomy is often visually represented as a pyramid with knowledge at the base of the pyramid. Representing the categories in this way shows the importance of having a base of knowledge. Eisner (2000) explains:
What is taxonomic about the taxonomy is that each subsequent level depends upon the student's ability to perform at the level or levels that precede it. For example, the ability to evaluate—the highest level in the cognitive taxonomy—is predicated on the assumption that for the student to be able to evaluate, he or she would need to have the necessary information, understand the information he or she had, be able to apply it, be able to analyze it, synthesize it, and then eventually evaluate it (p. 389).

A student who is able to meet the highest level, evaluate, has a clear and deep understanding of the content and is more likely to retain that knowledge long term.

In 2001, a revised version of Bloom’s Taxonomy was introduced with the title A Taxonomy for Teaching, Learning, and Assessing (Anderson et al., 2001). The revised taxonomy categories are action words: Remember, Understand, Apply, Analyze, Evaluate, and Create. According to Seaman (2011), this change not only emphasizes the active cognitive behaviors that are desired from a student, but also facilitates use by educators in designing and implementing curricula (p. 36). The use of action words transitions the focus to the students’ action, rather than the teacher’s actions.

If curricula are planned well, with emphasis on student learning, attention must be paid to creating learning objectives, and evaluating learning. Adams (2015) has explained that those “who train or instruct others can use Bloom’s taxonomy to write learning objectives that describe the skills and abilities that they desire their learners to master and demonstrate” (p. 152). Bloom’s Taxonomy calls attention to the need for higher levels of cognitive thinking in order to achieve deeper learning and retention of knowledge. Eisner (2000) argues, “the categories in the taxonomy not only serve as
means through which evaluation tasks could be formulated, but also provide a framework for the formulation of the objectives themselves (p. 389-390). With knowledge of Bloom’s Taxonomy, an educator has the base on which to begin to understand the necessity of objectives and evaluation of learning.
Review of the Literature

Introduction

Without art education in the classroom, students would be missing out on important educational benefits. The best outcome for art education would be that every student is introduced to art through a designated classroom with a specialized instructor. A specialized instructor, someone who has majored in Art Education or something very similar, is qualified to teach art and better able to foster students’ artistic abilities. A class devoted solely to art focuses on knowledge of the history of art as well as allowing the students to experiment and learn about artistic methods. While the use of this practice is ideal, there are ways to combat the loss of art classes to retain some of the benefits that art provides students. The willingness of teachers and Boards of Education to integrate art into existing curricula affects the future of art education greatly. Not only is it necessary to help allow students to gain the educational benefits that art provides, but it is also necessary to introduce art to students who could excel in the subject, possibly leading them to their future careers.

State of the Arts

Recent federal and state changes to the education system have had a negative effect on art education. The No Child Left Behind Act’s purpose, as it pertained to the arts, included the following three points:

(1) To support systemic education reform by strengthening arts education as an integral part of the elementary school and secondary school curriculum.
(2) To help ensure that all students meet challenging State academic content standards and challenging State student academic achievement standards in the arts.

(3) To support the national effort to enable all students to demonstrate competence in the arts (U.S. Department of Education, 2004, “Assistance for Arts Education,” para. 1).

Despite the implementation of the No Child Left Behind Act in 2001, the percent of public elementary schools reporting instruction designated specifically for art decreased 4% between the 1999/2000 school year and the 2009/2010 school year (as cited in Parsad & Spiegelman, 2012). Even more bothersome, only 84% of these schools that did provide instruction specifically dedicated to the arts provided art specialists to teach these classes (as cited in Parsad & Spiegelman, 2012). If art is an integral part of the curriculum, then art classes should not be decreasing in availability, as has been the case. Furthermore, students cannot be expected to demonstrate competency in the arts if they are not being properly instructed in the subject.

After the onset of the No Child Left Behind Act, the focus on art education was considered less important; budget cuts began to threaten any class that is not “common core,” which includes visual art classes. At this moment the creative arts are not included in The Common Core State Standards Initiative’s standards for English Language Arts and Literacy in History/Social Studies, Science, and Technical Subjects (Common Core State Standards Initiative, 2017). The Common Core Standards were put in effect by 42 of the States in the U.S. in order to help ensure that all students are knowledgeable in the subjects listed above before they graduate high school. The Common Core Standards
were implemented in an effort to prepare the students for college and/or careers (Common Core State Standards Initiative, 2017). Because the arts help to prepare students for college and future careers, it should be considered a part of Common Core.

As a response to some of the gaps in the No Child Left Behind Act in order to better prepare all students for success in college and careers, The Every Student Succeeds Act (ESSA) was signed by President Obama on December 10, 2015 (U.S. Department of Education, 2017). One purpose of ESSA was to ensure attention is more equally spread between all content areas, rather than emphasizing math and English/language arts specifically.

With the passage of ESSA, lawmakers sought to encourage states to re-establish what has been coined a well-rounded education for all students, which covers a wide selection of academic subjects, including the arts, humanities, sciences and social sciences, in addition to English language arts and mathematics (Education Commission of the States, 2016, p. 2).

No research is currently available showing the actual effect ESSA has on the availability of visual arts classes, although it can be expected that the research should be available within the coming years. As the arts can serve as an asset when applying for federal funding (Education Commission of the States, 2016, p. 3), it can also be assumed that it is in the best interest of schools to retain and improve students’ exposure to visual arts classes, in order to provide the students with a well-rounded education.

**Enrichment for Students Gifted in Art**

Educators may be exposed to students who are gifted in visual art; if teachers embrace that fact, they can support those students and help the students to improve their
visual art skills through integration. In 1993, the U.S. Department of Education identified artistically gifted children as an underserved population (as cited in The John F. Kennedy Center for the Arts, 2017b). The “arts integration curriculum design gives all students—not just those identified as ‘gifted and talented’—the opportunity to express their creativity and to learn critical-thinking, problem-solving, and innovation skills” (Sloan, 2009, para. 6). All students deserve the opportunity to improve skills they already have while also learning new skills. The John F. Kennedy Center for the Arts (2017b) has argued that educators must, “Remember that giftedness in the arts is no less meaningful than academic giftedness” (para. 8). Through the exposure to visual art, gifted students will be able to foster their skills and all other students will be given the opportunity to develop these skills.

**Future Careers in Art**

The demand for students to gain the skills necessary to succeed in their future careers begins early. Schools should be challenged to nurture the talents of students who excel in the visual arts, as those students could continue on to use their school visual arts experiences in their future careers. There are an immense number of careers that rely on skills attained through practicing visual art; careers such as art directors, animation, photography, painting, and sculpting are obvious examples (Bureau of Labor Statistics, 2015). Florists, tattoo artists, culinary artists, museum curators, architects, movie producers, fashion designers, web designers, and makeup artists also rely heavily on the skills gained through a visual art education (PayScale Inc., 2017). There are many careers available that may not be directly associated with what most people first think of when considering a career in art.
Although careers in visual arts are believed to be risky due to the availability of jobs, there has actually been a substantial growth in the number of jobs in this field. As stated in a report by the National Endowment for the Arts, which uses data from the Bureau of Labor Statistics, job growth in the arts will exceed job growth as a whole by 2018 (as cited in Bradford, 2011). According to the report, artistic careers for painters, architects, and photographers are expected to increase by 11 percent by 2018, compared to the projected ten percent total increase in the American labor force (as cited in Bradford, 2011). Additionally, many careers in art are growing in popularity. The fastest growing jobs for art and design majors are animator, art director, fashion designer, film director, graphic designer, interior designer, landscape architect, and photographer (as cited in Bradford, 2011). There is a future career for anyone who wants to focus on visual art, and the possibilities are limitless.

**Standards Alignment**

It is important to note that the intent of arts integration is not just to allow the students to have fun and is not just an enrichment activity. Teaching standards were put into place to ensure students are provided an adequate, equitable, and valuable education. According to The John F. Kennedy Center for the Performing Arts (2010), “arts integration is an approach to teaching in which students construct and demonstrate understanding through an art form. Students engage in a creative process which connects an art form and another subject area and meets evolving objectives in both” (p. 1). As with any other type of lesson plan, a lesson plan utilizing arts integration must meet the appropriate standards for each content area. In order to be considered integration, a lesson should address the standards for both content areas; this means a student should not just
create a piece of artwork, he or she should learn about art production and/or art history in addition to the core content.

There are many examples of how to successfully integrate visual arts, and no one way is correct. Susan Riley (2012), an arts integration specialist, has explained what it means to integrate:

From the students, integration demands creativity, problem-solving, perseverance, collaboration, and the ability to work through the rigorous demands of multiple ideas and concepts woven together to create a final product. Integration is not simply combining two or more contents together. It is an approach to teaching, which includes intentional identification of naturally aligned standards, taught authentically alongside meaningful assessments, which take both content areas to a whole new level (para. 3).

As Riley (2012) has stated, integration of art into curriculum will not be successful if it is not done in a meaningful way.

Franco and Unrath (2014) argue that K-12 visual arts education can “support the Standards in rich and powerful ways” (p. 32). There are numerous ways that art can support the Standards, making art very beneficial to students. According to Fung (2013), a National Board Certified teacher in Los Angles, the ways the “abandoned” arts can help students to better achieve Common Core standards include “enhancing creativity, increasing self-confidence, promoting collaboration, and offering alternative ways to assess learning” (para. 2). Studying art can also enhance keen observation, critical thinking, evidential reasoning, and effective communication. These qualities will be used by students throughout their entire educational career; students lacking these qualities
will have a difficult time staying active in the classroom. Associate Professor in Art, Deirdre Russell-Bowie (2013) states that “with a growing emphasis in schools on academic achievement, which is strictly limited to the core subjects of English, Maths, and Science, the arts offer a useful and creative system of learning, implicit with their own diverse range of skills that quite readily apply to everyday life and enhance children’s self-concept” (p. 1). Although the main focus in schools is put toward the “core” subjects, the arts should not be neglected in order to supply students with a well-rounded education.

**How to Integrate**

There is a wealth of resources available for anyone who desires to implement the integration of visual art into the classroom. The George Lucas Foundation (2013) has created a collection of resources on *Edutopia*, including research covering the benefits of arts integration, ways to link arts and core curriculum, and downloads and examples from schools which have successful practices. Barber (2015) provides a list of criteria educators can use when judging the quality and reliability of an integration resource, which includes:

1) Arts integration should be connected to a standard.
2) Arts integration projects should reflect learning.
3) Arts integration should involve student choice.
4) Arts integration projects should have specific grading rubrics.
5) Arts integration projects should be shared with others (para 2-6).

Learning occurs best when a student reaches the highest level of Bloom’s Taxonomy. Visual arts integration is one way to ensure students reach that level. When teachers
struggle to incorporate the arts without losing connections to standards, they can use the above criteria to determine if they are maintaining that connection.

When looking for ways to incorporate visual art, Ahmet (2016) argues, “it's important to ensure that the students are engaged throughout the process, and that they actually care about learning the content” (para. 8). If a teacher views the art aspect of a lesson as less important, the students will as well; emphasis should be placed on learning and growth in both the visual arts and the core curriculum.

Integration can be practiced in a variety of different ways. One specific example of how to integrate art into the English curriculum is by reading a book and connecting that to a piece of artwork that the students can re-create. In this example, students work with colors and will learn to recognize them, as well as learn that van Gogh was a painter, while improving reading comprehension skills at the same time. By reading *Van Gogh* by Mike Venezia (1989), and *Camille and the Sunflowers: A Story about Vincent van Gogh* by Laurence Anholt (1994) students can learn about the painter Vincent van Gogh. The students can note that van Gogh used wiggly lines, and he liked to glob on the paint. After reading the books, students should be able to make a reproduction of van Gogh's "Sunflowers” by following instructions given by the teacher (Ruiz, 2017). This lesson includes an emphasis on reading comprehension, art history, and art production. Most teachers get to choose which books their class reads, so this would be a simple activity to implement that could be manipulated to include numerous different artists and books. This project can also be simplified to have students create a piece of artwork inspired by
a book read in class. Incorporating art into these lesson plans makes it more memorable and more personable for the student.¹

Art can also be integrated into each of the other subjects, such as social studies. For example, students can view the architecture of a specific period or location by looking at cathedrals, such as Notre Dame in Paris. Viewing the architecture from an art education point of view can be paired with a focus on the social studies content through a study of religion the cathedral is used by, and/or a history of the area in which the cathedral was built. One way to integrate art with science would be a focus on patterns in nature. There are many patterns that appear naturally in nature; artwork could be created which is specifically inspired by those patterns, or simply with general patterns.

An example of how to integrate art with math is using mosaics to introduce the different shapes. Mosaics are patterns created through the close placement of different shapes next to each other (Tate, 2017). By using mosaics to introduce the shapes, the project becomes integration rather than just enrichment. Riley (2012) suggests an example of how to integrate visual art and science by connecting the earth's relationship in the galaxy, an understanding of measurement, use of observation skills, and Vincent van Gogh's "Starry Night" painting. More examples of integration with each content area can easily be found, but it is recommended that educators evaluate existing resources with the criteria previously mentioned in this research.

¹ For an additional sample of an art integration lesson, see also Education Closet (2011) for an example of how to connect the earth's relationship in the galaxy, an understanding of measurement, use of observation skills, and Vincent van Gogh's "Starry Night" painting.
See Education Closet (2012) for a connection of reading standards (using Daniel Defoe's Robinson Crusoe) and visual arts standards (using illustrations).
See The John F. Kennedy Center for the Performing Arts (2017a) to see numerous examples of arts integration.
See Chesser (2013) for 50 ways to integrate art into lessons.
See Kentucky Educational Television (2017) for various visual arts integration activities and resources.
See National Education Association (2015) for resources to aid in the integration process.
See https://kids.usa.gov/art-and-music/index.shtml for art content specific resources.
Opportunities for Learning

The classroom is filled with opportunities for learning that are not a part of the formal agenda but are still considered important, such as integrating visual art. Elliot W. Eisner (2002) presents the idea that rather than being seen as goals to aspire to, curriculum and standards should be seen as an opportunity for discussion and development. Teachers should use visual art to support student learning in conjunction with their existing lesson plans. The teacher’s task is to design an environment that promotes the educational development of the student. When following an arts integration model, Riley (2012) suggests, the products created are naturally richer and more extensive than from a “traditional” approach.

When given the chance, most students will become actively engaged in the art making process. Ahmet (2016) argues:

The fusion of arts with core content is important because, rather than seeing humanities or science as knowledge on a page, something to be recited in an exam, students see far greater benefits when art reflects life and makes knowledge, stories, and facts come alive. Art brings color, life, and interpretation to those things (para. 11).

The integration of art will encourage engagement from the students. Klima explains, “When you engage hands-on and you are creating your own learning, you are deepening your level of understanding about a specific topic” (as cited in Schwartz, 2015). By encouraging a higher level of interaction with the content, educators who integrate art into the curriculum are also encouraging deeper understanding of the content.
Teaching Strategies

The knowledge that the visual arts are beneficial to students is not based solely on observation and hypotheses. The College Board National Task Force on the Arts in Education (2009) has reported, “Studies by psychologists and neuroscientists have revealed that arts can have a persistent effect on the cognitive development in children” (p. 30). If a student’s education is shaped to help that student develop to the best of his or her ability, it needs to include visual art. The European League of Institutes of Art has stated “contemporary arts education understands that the skills and capabilities we help develop in our students are not based solely on the delivery of knowledge, but on the fostering of collaboration, networking, play, and stimulation” (as cited Maguire, Mishook, Garcia, & Gaillande, 2014, p. 6). Teachers should nurture curiosity and creativity in a student, which will result in learning.

Visual art provides an opportunity for students to be free to express themselves. David Rufo (2012) states, “In order for growth and learning to take place, educators must be willing to embrace artistic and creative serendipity” (p. 46).

Using Art to Represent Ideas

Teachers should encourage speaking, listening, and vocabulary skills with the help of visual art. The College Board National Task Force on the Arts in Education (2009) believes, “using words alone is akin to presenting this material in only two dimensions, whereas the same words accompanied by paintings, with students describing and analyzing what they are viewing, gives the presentation a captivating third dimension” (p. 34). Supporting curriculum with visual arts will allow students another insight into the way things work. Fung (2013) has said, “Connecting spoken words
(zigzag, sculpture, portrait, etc.) with a visual model helps students grasp new vocabulary” (Fung, 2013, para. 4). For example, instead of just saying, “yellow is a color,” a teacher should show students the color yellow. Anytime a teacher introduces new vocabulary, supplying students with a visual model will allow the students to visualize the idea and better grasp the concept.

**Clarifying Thoughts and Ideas**

Students can be asked to clarify thoughts and ideas through art. Students can create anything imaginable to help them retain what they are learning in any area. Creating things, such as models, diagrams, and drawings helps the students delve deeper into the units of study. Fung (2013) has said, “Art is particularly powerful when it allows students to communicate learning when they cannot express it through writing … Their work provides evidence that they were able to effectively communicate with each other to understand and complete the assignment” (para. 5). When students share their work, they are practicing their communication and presentation skills, which will become increasingly more important as they continue their education.

**Aiding in Retention and Utilization of Knowledge**

Integrating visual art into the general education classroom aids in the retention of knowledge and encourages the utilization of that knowledge. Sheila Kramer, who teaches K-5 science at the Spence School, in New York City has said:

It’s all about letting the kids learn in a more self-expressive, less threatening, hands-on type of way. . . No matter what subject you are teaching, if you can get children to look at or understand a concept in such a way that they can visualize it, experience it, or express it, then you know they will retain — and use — that
knowledge wherever they go. It will belong to them (as cited in Tilney, 2017, para. 24, 27).

Integrating art into the classroom has the potential to have a positive, lasting effect on student learning.

There are many different teaching strategies for teachers to use. The most important thing for teachers to remember is that they need to teach in whichever way(s) the students learn best. It is important to note that there may be many different preferred learning styles present in a class. Additionally, each individual may have more than one preferred learning style. For this reason, it becomes important to differentiate instruction to reach all students.

**Evaluation/Assessment of Student Progress**

Not all the skills and capabilities a student gains through direct instruction can be measured with a test. Some things gained through being exposed to art are more experiences than concrete knowledge. “Real-world” skills and critical thinking are very important for students to gain for future careers. Russell-Bowie (2013) has stated, “through integration of the arts, a higher level of learning and critical thinking is encouraged as children apply, compare, analyse, synthesise, and evaluate ideas and concepts across the art forms” (p. 4). Since education focuses on learning and critical thinking a subject, like art, that supports those characteristics should be deemed necessary for an effective education; however, these skills cannot be tested through a standardized multiple choice test. As schools push toward practices that tend to standardize, students should also be offered the kind of experiences and opportunities that the arts can provide.
The ability to assess a student’s learning in art has been argued by scholars. This may be due to the No Child Left Behind Act’s focus on the assessment of students’ learning in the classroom (Klein, 2015). Some leaders in education believe there is no way to assess a student’s learning in art. However, as argued by Andrade, Hefferen, and Palma (2014) there are a, “myriad of ways in which assessment can not only measure and document student learning, but also—and more importantly—actually promote learning” (p. 36). Oftentimes, it is assumed that art cannot be fairly assessed because it is a subjective area of study; not everyone enjoys the same type of artwork or possesses the same abilities and talents. Gude stated, “It is not our job as art teachers to assess student artwork. It is our job as teachers to assess student learning” (as cited in Sweeny, 2014, p. 11). The main objective for integration is to encourage learning in the student, which can be demonstrated, regardless of artistic ability.

Integrating art is not only a useful tool for encouraging learning; it can also be used to confirm what a student has learned. As explained by Andrade, Hefferen, and Palma (2014), formative assessment, “in terms of authentic artistic processes such as setting goals, assessing one's own work, and revising” can be used to “recognize any gaps in learning” (p. 35). When students are given the opportunity to self-assess, they are given the opportunity to take control of their learning.

Contrary to popular belief, the standard pencil-paper method can easily be used to assess learning in visual arts. For example, performance tasks such as the use of a set of art terms to compare two paintings, or requiring students to draw a figure and evaluate his or her own drawing can be administered in a pencil and paper format (Balsley, 2011).
Additionally, shorter assessments, such as exit slips, can be given using the pencil-paper method.

Another option for assessment is peer assessment or peer critiquing. Students can provide feedback to peers, which can be used to revise their artwork (Brown, 2014). As described by Newman (2014), peer critiquing “results in students having more responsibility for fostering learning and in improved student products. It also strengthens student bonds and creates a more supportive classroom environment” (p. 70). Peer critiquing allows the teacher to evaluate both the critiqued and the student providing the critique, as both students must understand the assignment in order to successfully critique another student’s work.

A final option for assessment highlighted in this thesis is a rubric. As explained by the Otis College of Art and Design (n.d.):

A rubric is a scoring tool that looks like a matrix with a list of criteria that contains descriptors in a performance scale which tells the students what the different levels of performance looks like. They help the student understand where they are in the development of their work, and help them to become independent learners (para. 2).

Rubrics clearly list expectations and criteria, allowing the student to know what is expected of him or her, and allowing the teacher to quickly and equitably score the work of each student.

Assessments should evaluate not only what students have learned, but the educator’s teaching methods as well. Kastberg (2003) argues that, “A teacher can use the processes from Bloom's taxonomy as an assessment framework to construct and revise
assessments so that they are consistent with what he or she has taught” (Kastberg, 2003, p. 403). Assessments should provide an opportunity for students to prove their ability to apply content knowledge. The method of assessment may be done through pencil and paper, the utilization of a rubric, through peer critiquing, or through self-assessment. Educators should evaluate the purpose and features of each method when choosing how to assess learning in the classroom.

**Gaps in the Research**

Vast research has been done on the benefits of visual arts; however, more specific benefits of visual arts integration would be beneficial. Additionally, research on the effects the implementation of ESSA has had on art education is needed. Since ESSA is in the early stages of implementation, this research is not currently available.

**Conclusion**

The visual arts can be integrated into a general education classroom in a variety of ways. Although the methods an educator chooses in relation to standards alignment, teaching strategies, and student assessment may differ, any type of visual arts integration will result in positive educational benefits (The College Board National Task Force on the Arts in Education (2009, p.30). Paired with the research covering how one can integrate visual arts into a general education classroom, understanding the theories, Gardner’s Multiple Intelligences, and Bloom’s Taxonomy, can be useful to those who are integrating visual art into the general education classroom.

With a wealth of resources available for educators looking to begin the process of visual arts integration, not all could be highlighted in this thesis. A select few were
highlighted, but educators are encouraged to explore and add additional resources as they become more familiar with the integration process.

The next four chapters are each composed of lesson plans. Each chapter is devoted to a specific content area: English/language arts, mathematics, science, or social studies. Within each chapter, there is one lesson plan for each of the following grades: first, third, and fifth. An experienced educator may also find it simple to adapt these lessons for other grade levels. All lesson plans are designed to meet local standards for the content area, and for visual arts.
CHAPTER III

Introduction

Chapter III is composed of lesson plans which focus on integrating English/language arts with a component of art education. These lessons are written around a common theme, as each includes a focus on the work of the author/illustrator, Peter H. Reynolds. This allows an experienced educator the opportunity to easily adapt these lessons into an author/illustrator study for one grade level.

Lesson one utilizes a method called the Directed Listening Thinking Activity (DLTA). By utilizing this method, students are encouraged to be active and thoughtful listeners, critical thinking skills are strengthened, and the instructor is able to monitor student understanding throughout the reading process (Reading Rockets, 2017). In this lesson, students will use the information they gained from listening to the read aloud in order to determine the main ideas and present them in a story line chain. Students will then be given the opportunity to create a sculpture, and provide written instructions on how to re-create the sculpture.

Lesson two requires students to work collaboratively in a small group to examine a work by Peter H. Reynolds in order to create a poster describing how the illustrations enhance or subtract from the storyline of the selected book. Working collaboratively allows students the opportunity to “teach each other by addressing misunderstandings and clarifying misconceptions” (Cornell University Center for Teaching Excellence, 2017). Students are assessed as a group based upon their group poster, and individually based upon an exit slip.
For lesson three, students are given the opportunity to explore theme in a piece of work, then encouraged to identify people, places, and things of significance in their own lives in order to create a piece of artwork relying on that theme. Students are encouraged to create sketches prior to completing the final piece of work. By encouraging students to begin with sketches, it allows the students to generate ideas, solve problems, and communicate ideas more effectively with others (Rohde, 2011). Through this lesson, students are encouraged to reflect deeper meaning in their own artwork.

The goal of integrating art into the classroom is to encourage students to think more critically and utilize their creativity. Peter H. Reynolds has always been an advocate for creativity and the arts, as can be seen throughout these lesson plans. As stated by Peter H. Reynolds (2015), “If classrooms were allowed to go ‘off-script’ more often, students would get practice thinking for themselves--and rather than be perplexed by being thrown into unfamiliar situations--they would be: delighted.”
English/Language Arts Lesson One: 1st Grade

**Going Places**

**Objectives**

- Students will list events from *Going Places* by Peter H. Reynolds to create a story line, scoring 6 out of 8 points on the rubric.
- Students will create a work of art (sculpture) and write instructions on how others can create the same construction, scoring 6 out of 8 points on the rubric.

**Connection to Standards**

**English/Language Arts Standard:**

The objectives outlined above align with the following Core Content standard because students will use the information they gained from listening to the read aloud in order to determine the main ideas and present them in a story line chain.

*CCSS.ELA-LITERACY.RL.1.2*

Retell stories, including key details, and demonstrate understanding of their central message or lesson.

**Visual Arts Standard:**

The objectives outlined above align with the following visual arts standard because students will use their creative skills to construct their own sculptures, in turn communicating their understanding of what qualifies as a sculpture.

*KENTUCKY STATE STANDARD MA:Pr5.1.3*

b. Exhibit basic creative skills to invent new content and solutions within and through media arts productions.

**Resources**

Reproducible A: Going Places Storyline Chain

Procedure / Strategies

Scenario:
We’re going places! There is more than just one way to get somewhere, as Maya and Rafael will help you discover. Today you will need your imagination and creativity to create your very own sculpture. You’ll have to think hard to create a set of instructions how others could re-create your construction, just like Maya and Rafael are given instructions for their project in Going Places.

Guided Practice:

Step 1: Motivation and Development of Background
Play "mystery" item game to introduce the story.
- The items in the box are all a way for people to go places.
- Objects could include miniature planes, trains, cars, bikes, subways, boats, or other methods of transportation.
- Each student gets to choose any one of the objects and tells what place they would decide to go to in that object. For example, one student may say they want to take a boat to Hawaii.
- The goal is to engage students and encourage them to think creatively.

Step 2: Initial Predictions
Ask students to look at the picture on the cover of the book, and ask the following questions:
- Who are two characters you would expect to be in the book?
- What are they doing?
- Are they going somewhere?
- If so, where do you think they are going?
- What other stories talk about going places?
- What are the characters on?

Prompt the students to ask questions about the book that can be answered in YES/NO responses.

Ask students to take a bit more information and make additional predictions more specific to the book- write down these answers for the class to refer to later.

Step 3: Set Purpose for Initial Reading
Read from pages 1 through 6 to find out what Rafael was waiting for. Then ask the following questions:
- What exactly was Rafael waiting for?
• What was the contest about?
• Who all got a kit?
• What were the kits for?

Check initial predictions to confirm/negate predictions.

What do you think is going to happen next? (Record predictions on a chart, etc.)

**Step 4: Continue reading and encouraging predictions.**

- **Read from page 7 to 10 to find out what Rafael did with the kit.**
  
  *How do you think Maya’s go-cart looks?*
  *Do you think Maya is finished with hers yet?*

- **Read pages 11 to 14 to see what Rafael sees when he visits Maya.**
  
  *Was Maya’s go-cart finished yet?*
  *When do you think she will be finished?*
  *What do you think is going to happen next?*

- **Read pages 15 through 18 to see what problem Maya has.**
  
  *What did Rafael tell Maya was her problem?*
  *What do you think Maya and Rafael will decide to do?*

- **Read 19 through 24 to find out what Maya and Rafael decided to do.**
  
  *What did the Rafael and Maya work on?*
  *Do you think the kids were right, are Maya and Rafael going to lose?*

- **Read 25 through 28 to find out if Rafael and Maya’s vehicle will work.**
  
  *Why did Rafael shout at Maya?*
  *Do you think they will be able to start the race?*

**Step 5: Students Practice Skills**

Students will create a “story line chain.” See *Reproducible A: Going Places Storyline Chain.*

- Students will retell the story in their own words, placing one event beside each numbered space.
- The student is required to have as many spaces filled in as it takes for them to retell the story (minimum of four events).
- After completing the activity sheet, the student will have the teacher approve the “story line chain” before cutting the worksheet into strips, with the title on one strip, and each number on a separate strip.
- Beginning with the title strip, the student should connect the two ends of the strip to create a circle, and paste the ends together.
- The student then connects the other strips, in order of the story line to the previous strip, resulting in a chain.
Product Created:

**Step 7: Visual Arts Activity**
Students each receive a selection of materials, each student receiving the same objects, and construct anything they would like.

After finishing their sculpture, students then write instructions on how others could re-create their construction. Explain to the students, that just like in *Going Places*, other students should be able to re-create the exact same sculpture using the provided directions.

Explain to the students that a sculpture means it has depth to it, and is not flat like a piece of paper.

Possible Materials:
- Toilet Paper/Paper Towel Rolls
- Construction Paper
- Pipe Cleaners
- Tissue Paper
- Model Magic
- Feathers
- Wood Craft Sticks
- Pom Poms
- Old Jars
- Buttons
- Ribbon/Twine/Cording
- Any “found materials”

**Step 8: Closure**
Ask students to share their creations in small groups.

Discuss *Going Places* as a group. Ask the students what influenced the predictions they made. Ask one or more students to share their story chain.

**Assessment / Evaluation**
- The teacher will evaluate the students’ story chains for accuracy. Refer to the book (*Going Places*) for the correct story line. Mastery is 6 out of 8 points.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>0 Points</th>
<th>1 Point</th>
<th>2 Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Events Included</td>
<td>The student does not include any events.</td>
<td>The student uses one to three events.</td>
<td>The student uses four or more events.</td>
</tr>
<tr>
<td>Accuracy of Events</td>
<td>None of the events accurately reflect the storyline.</td>
<td>Up to 75% of the events accurately reflect the storyline.</td>
<td>At least 75% of the events accurately reflect the storyline.</td>
</tr>
<tr>
<td>Summarizing</td>
<td>The student copied directly from the book.</td>
<td>The studies did summarize, but also copied some events from the book.</td>
<td>The student summarized the events in his or her own words.</td>
</tr>
<tr>
<td>Grammar</td>
<td>There 4+ mistakes in grammar, punctuation, or spelling</td>
<td>There are 2-4 mistakes in grammar, punctuation, or spelling</td>
<td>There are less than 2 mistakes in grammar, punctuation, or spelling</td>
</tr>
</tbody>
</table>

Total Points: /8
- The teacher will evaluate the students’ sculptures using the criteria outlined on the following rubric. Mastery is 6 out of 8 points.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>0 Points</th>
<th>1 Point</th>
<th>2 Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Production</td>
<td>The student does not complete a creation.</td>
<td>The student completes a creation, but it is not a sculpture.</td>
<td>The construction is a completed sculpture.</td>
</tr>
<tr>
<td>Attention to Detail</td>
<td>The construction is incomplete. There is no attention to detail and/or creative risk-taking apparent.</td>
<td>It is unclear how mindfulness informed the creative process; would benefit from further work.</td>
<td>The construction is well thought out and put together. Attention to detail and creative risk taking is apparent.</td>
</tr>
<tr>
<td>Completion of Instructions</td>
<td>The student does not complete any instructions.</td>
<td>The student begins writing instructions, but the instructions are not complete.</td>
<td>The student completes instructions on how to create their construction.</td>
</tr>
<tr>
<td>Clarity of Instructions</td>
<td>The instructions are hard to understand.</td>
<td>The instructions are mostly clear, but need some clarifications.</td>
<td>The instructions are clear and easy to follow.</td>
</tr>
</tbody>
</table>

Total Points: /8
Reproducibles

Reproducible A

Going Places Story Line Chain

Retell the story in your own words, placing one event beside each numbered space. You must use at least four (4) events. Show the worksheet to your teacher to learn the next steps!

1. 

2. 

3. 

4. 

5. 

6. 

7. 

8. 

Figure 1: English/Language Arts Lesson One - Going Places
Objectives

- Students will describe Peter H. Reynolds or his illustrations, scoring 7 out of 9 points on the exit slip.
- Students will work collaboratively to evaluate distinctive features of illustrations created by Peter H. Reynolds in order to create a poster describing how the illustrations enhance or subtract from the storyline of a selected book, using three examples from that book, scoring 12 out of 15 points on a rubric.

Connection to Standards

English /Language Arts Standard:

The objectives listed above relate to the following standards for learning content because paying particular attention to the illustrations will help students to better grasp the storyline in a book. This will also help encourage creativity in the student and inspire them to search for deeper meaning in the story.

*CCSS.ELA-LITERACY.RL.3.7*

Explain how specific aspects of a text's illustrations contribute to what is conveyed by the words in a story (e.g., create mood, emphasize aspects of a character or setting).

Visual Arts Standard:

The objectives outlined above align with the following visual arts standard because students will use create a poster describing how the illustrations enhance or subtract from the storyline of the book using three examples from the book. This requires the students having knowledge of the methods and styles or artwork, and how that artwork creates meaning.

*KENTUCKY STATE STANDARD MA:Re7.1.5*

a. Identify, describe, and differentiate how message and meaning are created by components in media artworks.
b. Identify, describe, and differentiate how various forms, methods, and styles in media artworks manage audience experience.

Resources

Below is a list of books which can be chosen from for students to analyze illustrations of Peter H. Reynolds:

*The Dot* written and illustrated by Peter H. Reynolds:

*Ish* written and illustrated by Peter H. Reynolds:


*Sky Color* written and illustrated by Peter H. Reynolds:


*So Few of Me* written and illustrated by Peter H. Reynolds:


*Rose's Garden* written and illustrated by Peter H. Reynolds:


*I'm Here* written and illustrated by Peter H. Reynolds:


*Going Places* written and illustrated by Peter H. Reynolds:


*The North Star* written and illustrated by Peter H. Reynolds


Students can also use Peter H. Reynolds's personal website with links to Peter's Art, Books and Projects, ideas and tips from the illustrator, as well as his personal blog:

[http://www.peterhreynolds.com](http://www.peterhreynolds.com)


**Reproducible A: Peter H. Reynolds Exploration Activity**


<table>
<thead>
<tr>
<th>Procedures / Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Scenario:</strong></td>
</tr>
</tbody>
</table>

Do you ever wonder how an illustrator is able to bring a story to life through pictures? The artwork of Peter H. Reynolds will be evaluated in order to encourage the reader to search for deeper meaning in a story. Students will explore the artwork of Peter H. Reynolds in order to become more familiar with his artistic style. Students will then work in groups to create a poster describing how the illustrations enhance or subtract from the storyline of the book using three examples from the book.
Guided Practice:

1. Information about Peter H. Reynolds will be separated and written on dots (inspired by one of Reynolds’ books) and scattered throughout the room. (See Reproducible A: Peter H. Reynolds Exploration).

2. One at a time, students will be chosen to go find a dot. Each student will have the opportunity to find a dot.

3. Each student will read the information from their dot to their peers, with assistance from the teacher if necessary.

4. Show the student’s Peter H. Reynolds’ website. While the students are exploring all the given information, have them write down interesting facts in their journal.

5. Ask a couple of students to share what they found most interesting, and why. (Later students will write their three most interesting facts down to turn in as an exit slip.)

6. Next, introduce the students to the books Peter H. Reynolds has illustrated. Give only a small description of each, so that the storyline is not given away.

7. Allow each child to choose which book they would like to evaluate.

8. Separate the class into groups of 3-4 students based on the book they chose to evaluate.

Role assignment & responsibilities: Remind students that along with their individual assignments, each member should contribute ideas, listen to others, stay on task, remain positive, and clean up when the activity is completed. For groups with more or less than four students, some roles may need to be combined.

The Leader- leads discussions, helps members clarify key statements, protects all members from being ignored or bullied, makes sure that every voice is heard, and focuses work around the learning task.

The Recorder- prepares a summary of what the group has done, writes down information the group deems important, and displays the information on a poster. Also responsible for writing down questions to ask peers at the end of the presentation to make sure they were paying attention and understood the main points.

The Editor- checks to be sure that ideas are clear and accurate, makes sure no important information has been left out, and checks for spelling and grammatical errors.

The Presenter- shows the group’s finished product to the class, and speaks loudly and clearly so that all students can hear and understand what is being said. Also responsible for asking peers the questions they have prepared.
9. Have the students go through the books, first only looking at the illustrations before reading the words. Remind the students to take note of how the Elements of Art are being used in the illustrations. The elements of art are line, color, texture, shape, form, value and space. Have the students compare how the verbal text matches the visual story structure. Talk together about how the quality and movement of the lines in the illustration match the story that the words are telling. (An exciting example of this is the book *Ish* by Peter H. Reynolds, as it incorporates a variety of different lengths and textures of lines.)

10. Have the students discuss and record what they see, and what they imagine the events of the story might be. Also have the students guess what might happen next before turning the page.

11. After evaluating the book, the students are required to compile a list of 10 adjectives describing Reynolds’ illustrations.

12. After describing the style of the illustrations, students will work collaboratively in their small groups to create an 8.5” x 11” poster describing how the illustrations enhance or subtract from the storyline of the book using three examples from the book. The poster must include the title of the book, author, and illustrator.

13. **Share findings:** Students will share their posters with the class at the end of the class period. Each student should pay attention to every presentation, including their own. Students should be able to answer the questions presented to them by the group to show they were paying attention.
**Product Created:**

Students will create a poster (at least 8.5” x 11”) describing how the illustrations enhance or subtract from the storyline of the book using three examples from the book. The poster must include the title of the book, author, and illustrator.

**Materials:**
- White Poster Paper
- Markers – Various Colors
- Ruler
- Access to copier / scanner / printer
- Scissors
- Glue

**Assessment / Evaluation**

- Students will be assessed individually based on their exit slip, which must include three sentences describing Peter H. Reynolds or his illustrations. Mastery is 7 out of 9 points.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>0 Points</th>
<th>1 Point</th>
<th>2 Points</th>
<th>3 Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Sentences</td>
<td>The student does not provide any sentences.</td>
<td>The student uses one sentence to describe Peter H. Reynolds or his illustrations.</td>
<td>The student uses two sentences to describe Peter H. Reynolds or his illustrations.</td>
<td>The student uses three or more sentences to describe Peter H. Reynolds or his illustrations.</td>
</tr>
<tr>
<td>Accuracy</td>
<td>The description does not accurately describe Peter H. Reynolds or his illustrations.</td>
<td>The description is mostly inaccurate in relation to Peter H. Reynolds and/or his illustrations.</td>
<td>The description is mostly accurate in relation to Peter H. Reynolds and/or his illustrations.</td>
<td>The description accurately describes Peter H. Reynolds and/or his illustrations.</td>
</tr>
<tr>
<td>Grammar</td>
<td>There are more than 4 mistakes in grammar, punctuation, or spelling.</td>
<td>There are 3-4 mistakes in grammar, punctuation, or spelling.</td>
<td>There are 1-2 mistakes in grammar, punctuation, or spelling.</td>
<td>There are no mistakes in grammar, punctuation, or spelling.</td>
</tr>
</tbody>
</table>

**Total Points:** 9
- The students will be assessed in groups based on their group presentations. Mastery is considered 12 out of 15 points on the rubric.

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facts</td>
<td>Does not use any examples from the book to describe how the</td>
<td>Describes how the illustrations affect the audience’s experience</td>
<td>Describes how the illustrations affect the audience’s experience</td>
<td>Describes how the illustrations affect the audience’s experience</td>
</tr>
<tr>
<td></td>
<td>illustrations affect the audience’s experience using one example from the book.</td>
<td>using one example from the book.</td>
<td>using two examples from the book.</td>
<td>using three or more examples from the book.</td>
</tr>
<tr>
<td>Graphics</td>
<td>None of the graphics used are related to the topic.</td>
<td>Two graphics are not related to the topic.</td>
<td>One graphic is not related to the topic.</td>
<td>All graphics are related to the topic and make it easier to understand.</td>
</tr>
<tr>
<td>Neatness</td>
<td>The poster is messy or very poorly designed.</td>
<td>The poster is acceptably put together, although it may be a bit messy.</td>
<td>The poster is well put together in terms of design, layout, and neatness.</td>
<td>The poster is exceptionally well put together in terms of design, layout, and neatness.</td>
</tr>
<tr>
<td>Grammar</td>
<td>There are more than 4 mistakes in grammar, punctuation, or spelling.</td>
<td>There are 3-4 mistakes in grammar, punctuation, or spelling.</td>
<td>There are 1-2 mistakes in grammar, punctuation, or spelling.</td>
<td>There are no mistakes in grammar, punctuation, or spelling.</td>
</tr>
<tr>
<td>Additional Information</td>
<td>The author, illustrator, and title of the book are not included.</td>
<td>The poster is missing two of the following: author, illustrator, title.</td>
<td>The poster is missing one of the following: author, illustrator, title.</td>
<td>The author, illustrator, and title of the book are included.</td>
</tr>
</tbody>
</table>

Rubric adapted from (Cuero IDD, n.d.): [http://www.cueroisd.org/userfiles/10/state%20poster.png](http://www.cueroisd.org/userfiles/10/state%20poster.png)

**Additional Suggestions and Connections**

This lesson can be taught prior to or after other illustrator studies. Students should have prior knowledge on the elements of art and should be able to recognize the elements in illustrations. While this lesson focuses on the illustrations of Peter H. Reynolds, other lessons in a unit utilizing this lesson could focus on additional illustrators. The aim is to have students recognize that each illustrator has his or her own unique style and that style affects the storyline and how the story is interpreted by the audience.
Find the Dots!
Cut out each dot individually. Scatter and allow students to search and find!

He is a New York Times best-selling author/illustrator.

He is the founder of FableVision, an award-winning educational multimedia company co-located at the Boston Children’s Museum.

He has a twin brother named Paul!

His hobbies include thinking, abd dreaming!

He created his first animated film designed to teach in the 7th grade!

He wrote and illustrated: The Dot, Ish, Sky Color, I’m Here, and So Few of Me. Just to name a few!

Along with digital doodles and drawings, he likes to create a lot of digital animations.

He has created both short films, and interactive stories, which can be found online.

He says he never limits himself when it comes to expressing his creativity. He likes to draw and paint on almost any blank surface he can find!

He has about 6 new books in the works and ideas for about 100 more!

He estimates that he has probably written about 65 stories.

He says that doing both the art and writing is his favorite.

He illustrated Plant a Kiss by my Krous Rosenthal.

Peter owns his own bookstore in Dedham, Massachusetts!

He has created both short films, and interactive stories, which can be found online.

Peter H. Reynolds’ books inspire children with his messages about authentic learning, creativity, bravery, empathy, and courageous self-expression.

Figure 2: English/Language Arts Lesson Two - Author, Illustrator & Dreamer

Information accessed and summarized from peterhreynolds.com
Share Your Story

Objectives

• Students will argue the theme of *The North Star* by Peter H. Reynolds using evidence from the book to support their answer, scoring 4 out of 5 points on the exit slip.
• Students will create a Five Panel Drawing scoring 6 out of 8 on the rubric.

Connection to Standards

English/Language Arts Standard:
The objectives listed above relate to the following standards for learning content because paying particular attention to the details in the story will help students to better grasp the theme in the book. Additionally, students are encouraged to analyze the visual elements of the story to find how the visual elements contribute to the meaning, and theme of the story.

*CCSS.ELA-LITERACY.RL.5.2*
Determine a theme of a story, drama, or poem from details in the text, including how characters in a story or drama respond to challenges or how the speaker in a poem reflects upon a topic; summarize the text.

*CCSS.ELA-LITERACY.RL.5.7*
Analyze how visual and multimedia elements contribute to the meaning, tone, or beauty of a text (e.g., graphic novel, multimedia presentation of fiction, folktale, myth, poem).

Visual Arts Standard:
The objectives listed above relate to the following visual arts standards because students are able to identify people, places, and things of significance in their own lives in order to create a piece of artwork relying on that theme. This will also help encourage the students to reflect deeper meaning in their own artwork.

*KENTUCKY STATE STANDARD VA:Cr2.3.5*
Identify, describe, and visually document places and/or objects of personal significance.

*KENTUCKY STATE STANDARD VA:Cr2.1.5*
Experiment and develop skills in multiple artmaking techniques and approaches through practice.
Resources


*The North Star* Book Cover

Reproducible A: Theme Handout
The Curriculum Corner. (2017). *Theme*. Adapted from  
http://www.thecurriculumcorner.com/thecurriculumcorner123/wp-content/pdf/theme/themeanchorideas.PDF

Reproducible B: Theme Exit Slip

Reproducible C: Five Panel Drawing Assignment

Procedures / Strategies

Scenario:

When you read a story, it always has a theme - the moral, message, or lesson learned. If the story didn’t tell you anything new or exciting, it wouldn’t be very fun to read. Have you ever thought about how you have a story to tell? Every decision you make contributes to your story in one way or another. What themes have you seen appear in your life? Ponder on the places you have been, people you know, and the things you have done. How might these things look if you shared your story through artwork? Would your artwork look the same, or different than your friend's artwork?
**Guided Practice:**

1. The teacher will explain to students that a theme is the moral, message, or lesson of a story. Share *Reproducible A: Theme Handout* with the students. This can be printed for each student to keep in a reading journal.
2. The class will read *The North Star* by Peter H. Reynolds. It is recommended that this be done as a read aloud.
   - Instruct students to pay attention to the storyline and gather evidence that points to any particular theme.
3. After reading *The North Star*, the class will discuss the theme of the story.
   - Encourage students to summarize the text and use evidence from the story to defend their ideas.
   - Remind students that as long as their argument is reasonable and backed by evidence, there is no wrong answer for the theme.
4. Students will complete the theme worksheet (*Reproducible B: Theme Exit Slip*) as an exit slip.
5. Next, the class will discuss Peter H. Reynolds and his method of creating artwork. Discuss how the illustrations in the book add to the theme of the story.
6. Following the class discussion, the teacher will introduce the art production assignment: Five Panel Drawing. (See *Reproducible C: Five Panel Drawing Assignment*).

**Assessment / Evaluation**

- The teacher will evaluate the students’ exit slips for completion and accuracy according to the following checklist. Mastery is 4 out of 5 points.

<table>
<thead>
<tr>
<th>Exit Slip Checklist</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Title of the Book is included, and written according to proper grammar rules.</td>
<td>1 point</td>
</tr>
<tr>
<td>Theme is given, and is a reasonable theme considering the evidence provided.</td>
<td>1 point</td>
</tr>
<tr>
<td>Three pieces of evidence from the text are provided that support the chosen theme.</td>
<td>3 points</td>
</tr>
</tbody>
</table>

Total Points: /5 points
The teacher will evaluate the students’ Five Panel Drawings according to the following rubric. Mastery is 6 out of 8 points.

<table>
<thead>
<tr>
<th>Project Outcome Criteria</th>
<th>0 Points</th>
<th>1 Point</th>
<th>2 Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Panels Completed</td>
<td>None of the panels are complete.</td>
<td>The student completes some, but not all of the panels.</td>
<td>All Five Panels are completed and contribute to the work as a whole.</td>
</tr>
<tr>
<td>Attention to Detail</td>
<td>The work of art is incomplete. There is no attention to detail and/or creative risk-taking apparent.</td>
<td>It is unclear how mindfulness informed the creative process. The panels would benefit from further work.</td>
<td>The panels are well thought out and put together.</td>
</tr>
<tr>
<td>Concept</td>
<td>The student does not reference any of the recommended questions.</td>
<td>The student references between one and four of the recommended questions.</td>
<td>The student references at least five of the recommended questions.</td>
</tr>
<tr>
<td>Use of Materials</td>
<td>The student shows little to no craftsmanship and little to no understanding of the materials used.</td>
<td>The student shows some craftsmanship and some understanding of the materials used.</td>
<td>The student shows craftsmanship and an understanding of the materials used.</td>
</tr>
</tbody>
</table>

Total Points: /8
Reproducibles

Reproducible A

The theme of a story is the moral, message, or lesson of a story.

- bravery * love
- honesty * hard work
- kindness * respect
- fairness * friendship
- perseverance
- cooperation
- responsibility
- accepting others
- overcoming obstacles

www.thecurriculumcorner.com
Reproducible B

Name: _______________________

**Theme**

The theme of the book is: _______________________

Support from the text - this is your evidence!

1. _______________________

2. _______________________

3. _______________________
Five Panel Drawing Assignment

Supplies Needed:
- **Drawing Utensils of Choice**: No. 2 pencils, Colored Pencils, Crayons, etc
- **5 Strips of Paper**: Ratio of 1 to 3; Recommended size 3in. x 9 in.
- **Sketch paper, or sketch book**: any size, any type

1. **Students will each create a list of important things, ideas, or events in his/her life.**

   The student must address at least five of the following questions:
   - Where have I been in the past?
   - Where am I now?
   - Where is it that I want to be going?
   - What is something important to me?
   - What special talent do I have?
   - What place is special to me?
   - Who has helped me find my way?
   - What do I hope to do someday?
   - What do I need to be happier?
   - What is a big dream I have?
   - Who have I helped along the way?

2. **Students create sketches to organize their ideas.**

   Encourage students to come up with a way to organize their drawings; for example, they may answer one question on each panel, or they may find questions of similar themes, and answer more than one question per panel. Each student must complete at least one half size sketch (at least 1.5in x 4.5in) for each panel before beginning on the final drawing.

3. **Once a student has a substantially expanded idea for their panel drawing they must get their sketches approved, and receive feedback from the teacher.**

4. **Upon receiving approval from the teacher, students will each complete a full size 5 panel drawing.**

*Encourage students to experiment with the display of the 5 panels to find the arrangement they find most pleasing. Demonstrate how the location of the panels can affect the overall effect of the piece of artwork.
Conclusion

The previous three lesson plans have been created in order to provide educators with reliable English/language arts lesson plans that will allow for the integration of visual art into the classroom. Although the end products vary (sculpture, poster, and drawings), each lesson gives students the opportunity to clarify their thoughts and ideas, and use art to represent ideas. The inclusion of specific learning objectives based off of local standards and rubrics for each lesson allows instructors to easily assess student learning at the end of each lesson. As the products are all physical products, a rubric is necessary to ensure the products are all measured by the same criteria. Each lesson utilizes an exit slip in order to aid in instructor assessment of student progress. Through teaching strategies such as the use of DLTAs, collaborative learning, and discussion, students are encouraged to think more critically and utilize their creativity.

The following chapter contains lesson plans which focus on integrating mathematics with a component of art education. These lesson plans demonstrate the integration of art with the specific topic, geometry. In lesson one, the specific focus is geometric shapes, for lesson two the focus is tessellations, and for lesson three the focus is quadrilaterals. A variety of activities and artistic processes are implemented within each lesson.
CHAPTER IV

Introduction

Chapter IV is composed of lesson plans which focus on integrating mathematics with a component of art education. The common theme for these lesson plans is a focus on geometry. In lesson one, the specific focus is geometric shapes, for lesson two the focus is tessellations, and for lesson three the focus is quadrilaterals.

Lesson one introduces student to types of two-dimensional shapes. As one of the elements of art, shape is an extremely important topic for students to understand. Shape is also an important topic to master in geometry; as argued by The National Council of Teachers of Mathematics, “Children who develop a strong sense of spatial relationships and who master the concepts and language of geometry are better prepared to learn number and measurement ideas, as well as other advanced mathematical topics” (as cited in Annenberg Foundation, 2017, para. 2). In this lesson, students will learn to recognize shapes and use that knowledge in order to break down complex objects into simple shapes. Students will then be given the opportunity to utilize different shapes in order to create a collage.

Lesson two will allow students to use their knowledge of categories of shapes to determine which shapes are able to be used to create regular tessellations. Students will then have the opportunity to choose an artistic medium and use that medium to complete an 8.5” by 11” tessellation of their own creation. The Teaching for Artistic Behavior organization (2017) argues that “Choice-based art education supports multiple modes of learning and assessment for the diverse needs of students” (para. 2). By providing
students with the option to choose a medium, rather than setting a required medium, students are given the opportunity to take charge of their learning.

For lesson three, students will be required to demonstrate quality craftsmanship when creating a piece of artwork featuring quadrilaterals. Students will use their knowledge of categories of two-dimensional figures to determine which shapes fit into specific categories, and are able to classify those shapes according to specific properties. Through this lesson, students are challenged to combine their understanding of quadrilaterals with their understanding of hues, tints, and shades to create a piece of artwork.

Integrating art with geometry is only one of the many ways to integrate art with mathematics. As argued by Susan Riley (2012), “While at first glance the integration of art and math would seem like trying to mix oil and water, there are many useful ways to integrate these two subjects…When thinking of math not strictly in terms of arithmetic, but also in terms of problem solving, geometry, and visualization, ideas will start to materialize for integrated lesson plans” (para. 2). The integration of art and mathematics can be useful for helping students recognize connections in order to cement learning in each subject area.
Shapes! Shapes! They’re everywhere!

Objectives

- Students will distinguish between shapes, scoring 6 out of 7 on the exit slip.
- Students will use shapes to create a collage image, scoring 6 out of 8 points.

Connection to Standards

Mathematics Standard:

The objectives listed above relate to the following standard for learning content because students will need to be able to distinguish shapes to complete both the exit slip and the collage. Additionally, the collage will rely on differentiating non-defining attributes such as varying color, orientation, and/or size of the shapes used.

CCSS.MATH.CONTENT.1.G.A.1
Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.

Visual Arts Standard:

The objectives listed above relate to the following visual arts standard because students will not only need to be able to recognize different types of shapes, but will also need to be able to vocalize the different shapes that are utilized within the collage.

KENTUCKY STATE STANDARD VA:Cr3.1.1
Use art vocabulary to describe choices while creating art.

Resources

Video: Shapes Song (Show through 1:43)

Reproducible A: Shapes

Reproducible B: House Graphic
Reproducible C: Flower Graphic

Reproducible D: Train Graphic

Reproducible E: Collage Example – Rainbow

Reproducible F: Collage Example – College Town

Reproducible G: Collage Example – Car and House

Reproducible E: Shape Collage Checklist

Reproducible F: Shapes Exit Slip
Procedures / Strategies

Scenario:

What do houses, trains, and flowers have in common? Shapes! Shapes make up the things we see all around us. How many shapes do you know? Did you know that things that may look complicated, like a house, can actually be broken down into smaller shapes! Use the shapes you know to make a picture of something you see, and maybe even use every day!

Guided Practice:

Step 1: Engage- Show the Shapes Song YouTube video. End the video at 1:43.

Step 2: Explain- Begin the lesson with a short lesson on shapes. Utilize Reproducible A to show the eight simple two-dimensional shapes highlighted in the video.

- Ask the students if they remember any of the shapes from the video.
  - Allow the students to point to and name the shapes they remember.
- Point to each shape, and say the name of the shape.
  - Have the students repeat the name of the shape back to you.
- After naming each shape, demonstrate how to draw the shape on the board.
  - If all students are already familiar with the shapes, call on different students to demonstrate drawing each shape.
- Utilize the image of the house, Reproducible B to point out how to break down complex objects into simple shapes.
  - Point out how the house is like a square with a triangle on top. The lower windows, door, and chimney are all like rectangles, and the upper window is like half of a circle (semi-circle). Additionally, point out that there are smaller rectangles within the door, windows, and the bricks on the bottom of the house and in the chimney.
- Utilize the image of the flower, Reproducible C to point out how to break down complex objects into simple shapes.
  - Point out how the center of the flower (the pistil) is like a circle with other smaller circles inside it. Also point out how the petals are similar to triangles, and the stem is similar to a rectangle.
- Utilize the image of the train, Reproducible D to point out how to break down complex objects into simple shapes.
  - Point out how the smoke coming out above the train and the wheels are all made up of circles. Each train car is a rectangle, while the locomotive at the front is made up of part of a circle, a triangle, squares, and rectangles.
o Attempt to have the students point out the shape that is different from the others they have learned about (the trapezoid).

**Step 4: Explore**- Allow each student to choose an object in the room.
- After each student has chosen an object, separate the students into small groups of 3-4.
- Instruct the students to discuss which shapes they can see in their object with their small group.
- After 3-5 minutes, invite individuals from each small group to share their findings with the whole group.

**Step 5: Expand**- Following the group discussion, students will come back to the classroom to create their own collages out of cut out shapes.

Show the students some examples of collages (*Reproducibles E, F, G*), and then challenge them to make their own. Remind students to ask questions or to ask for help if needed.
Product Created:

Students will create a collage of shapes. Prepare a range of different sized and colored squares, triangles, rectangles, circles, stars, and rhombuses for the students to choose from.

Materials:
- Cut out shapes (Variety of sizes and colors.)
- 8.5” x 11” Paper
- Glue sticks

Procedure:
1. Inform students they should use the cut out shapes to create an image.
   - The image can feature more than one item. For example, an image may contain a house, the sun, and a mailbox, and use triangles, circles, squares, and rectangles.
   - Students must use at least four different shapes.
2. Provide students with the pre-cut shapes, paper, and glue sticks.
3. Provide guidance when needed.

Step 6: Closure-

1. Ask the students to name the shapes discussed in today’s lesson.
   - Allow 7 different students to each name a shape.
2. Point to each shape on Reproducible A again, and have all students repeat the name of the shapes back to you.
3. Remind students to keep an eye out for shapes in the objects they use throughout the day. Follow up with students the next class period to see if anyone found shapes throughout the day.
The teacher will evaluate the students’ work by having the students individually vocalize to the teacher which shapes are on their collage. Mastery is 6 out of 8 points.

- Teacher will use *Reproducible H* to record student responses.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>0 Points</th>
<th>1 Point</th>
<th>2 Points</th>
<th>3 Points</th>
<th>4 Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to Vocalize Shape Names</td>
<td>The student cannot name any of the shapes used in the collage.</td>
<td>The student can name one shape used in the collage.</td>
<td>The student can name two shapes used in the collage.</td>
<td>The student can name three shapes used in the collage.</td>
<td>The student can name four or more shapes used in the collage.</td>
</tr>
<tr>
<td>Use of Shapes in Collage</td>
<td>The student does not use any of the shapes in the collage.</td>
<td>The student uses one shape in the collage.</td>
<td>The student uses two shapes in the collage.</td>
<td>The student uses three shapes in the collage.</td>
<td>The student uses four or more shapes in the collage.</td>
</tr>
</tbody>
</table>

**Total Points: 8 pts**

- Each student will complete the exit slip (*Reproducible I*). Mastery is 6 out of 7.
Reproducibles

Reproducible A

![Reproducible A](image1)

Reproducible B

![Reproducible B](image2)

Reproducible C

![Reproducible C](image3)
Reproducible D

Reproducible E

Reproducible F
Put an X under each shape the student successfully names that was used in his or her collage. For full points a student should name four shapes used in his or her collage. Mastery is three shapes named.

<table>
<thead>
<tr>
<th>Student Name</th>
<th>Circle</th>
<th>Square</th>
<th>Rectangle</th>
<th>Star</th>
<th>Rhombus</th>
<th>Triangle</th>
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</table>
Shapes Exit Slip

Name _______________  Date __________

The teacher will read the names of each shape out loud. Draw a line from the name of the shape to the picture of that shape.

1. Rectangle

2. Circle

3. Triangle

4. Rhombus

5. Square

6. Star

Figure 4: Mathematics Lesson One - Shapes! Shapes! They're Everywhere
Mathematics Lesson Two: 3rd Grade

Tessellation Creations

Objectives

- After seeing examples of tessellations, students will evaluate which shapes are capable of creating a regular tessellation and score 3 out of 4 on the exit slip.
- Students will choose an artistic medium and use that medium to complete an 8.5” by 11” tessellation of their own creation and score 5 out of 6 on the rubric.

Connection to Standards

Mathematics Standard:
The objectives listed above aligns with the Core Content standard listed below because students will use their knowledge of categories of shapes to determine which shapes are able to be used to create regular tessellations.

*CCSS.MATH.CONTENT.3.G.A.1*
Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.

Visual Arts Standard:
The objectives listed above align with the visual arts standard listed below because students will create their own tessellations, created from polygons, in order to communicate their knowledge of tessellations.

*KENTUCKY STATE STANDARD MA:Cr3.1.3a*
Construct and order various content into unified, purposeful media arts productions, describing and applying a defined set of principles, such as movement and force.

Resources

**Reproducible A: Tessellation Visual**

**Reproducible B: 2D Regular Polygons**
Reproducible C: Regular Tessellation

Reproducible D: Honeycomb

Reproducible E: Pyramid at the Louvre

Reproducible F: Brick Pathway

Reproducible G: Regular Tessellation Exit Slip

### Procedures / Strategies

**Scenario:**

Art can be found all around us, in things we see and use every day. A tessellation is a type of pattern that you can find in nature and even in architecture. A special kind of tessellation can be made using just one shape repeated over and over again. You’ll get to see which three shapes are capable of making this type of tessellation, and even have the opportunity to make your own tessellation artwork.

**Guided Practice:**

**Step 1: Engage**- Have each student try to write down as many different shapes as they can in thirty seconds.

**Step 2: Explain**- Begin the lesson with a short lesson on tessellations.

- Utilize *Reproducible A* to define tessellations.
- Inform students that a “Regular Tessellation” is a special kind of tessellation made by repeating a regular polygon.
- **Ask the students: Does anybody know what a regular polygon is?**
  - If yes, ask, **Can you draw me an example on the white board?**
  - Allow any other students that know an example to draw one on the white board.
  - If the student answers no, utilize *Reproducible B* to define regular tessellations.
• Ask the students: So now that you know what a regular polygon is, which regular polygons do you think can make a regular tessellation?
  o Once the students have made their guesses, utilize Reproducible C to inform students which regular polygons can be made into regular tessellations.
• Ask the students: Does this make sense? Have we gone over anything that you would like explained better, or in a different way?
  o Students should be familiar with the term vertex, however it may be necessary to define vertex: the point where two lines meet to create an angle. Utilize Reproducible B to point out the vertices in the different regular polygons.

Step 4: Explore- If there are examples of tessellations in architecture where the lesson is being taught, allow students to explore and discuss the tessellations- including what shapes make up the tessellation, and whether or not it qualifies as a regular tessellation. (Evaluate floors, walls, and ceilings for possible tessellations.)

If, however, no tessellations are available, show the real-life examples below:

Reproducible D: Honeycomb
Reproducible E: Pyramid at the Louvre
Reproducible F: Brick Pathway (Reproducible)

Step 5: Expand- Following the short excursion (if the class was able to explore the local architecture), students will come back to the classroom to create their own tessellations.

Show the students how to make a tessellation using a square template and then challenge them to make their own, and remind them they are allowed to ask questions and ask for help if needed.

Prepare a range of different size square, triangle, and hexagon templates for the students to choose from.

Materials:
1. Square, Triangle, and Hexagon Templates
   (Variety of sizes, i.e. 1 inch sides, 1.5 inch sides, 2 inch sides, etc.)
2. 8.5” x 11” Paper (One per student)
3. Pencil/Eraser (One per student)
4. Variety of artistic mediums - Colored pencils, markers, crayons, watercolor, pastel, etc.

Procedure: (Demonstrate this before allowing the students to work individually. As you are doing the demonstration, restate the three rules: No gaps or overlaps, must use ONE type of REGULAR polygon, and each vertex must look the same. Display the rules somewhere students can see.)
1. Select one of the shape templates.
2. Set the template on the paper.
3. Use a pencil to trace around the shape.
4. Align one edge of the template with one edge of the shape you just traced onto the paper.
5. Use a pencil to trace the remaining sides of the shape.
6. Continue steps one through five until the shapes cover the page without any gaps or overlaps.

**Note:**
Inform students they should not color in the tessellation until it is completely drawn out. If students complete the task quickly, challenge them to use more than one shape template to create another tessellation and cover the page without gaps or overlaps. Students can add color to make the tessellations more interesting! You can also challenge the student to choose a color scheme to color their tessellation with- i.e. monochromatic, analogous colors, primary, secondary, or tertiary colors.

- **Analogous**- three colors that are next to each other on the color wheel; ex: red, orange, red-orange / blue, green, blue-green
- **Primary**- red, blue, yellow
- **Secondary**- green, orange, purple
- **Tertiary**- red-orange, yellow-orange, red-purple, blue-purple, blue-green, yellow-green

**Step 6: Closure:**
4. Ask the students the three key points that must be followed to make a regular tessellation: No gaps or overlaps, must use ONE type of REGULAR polygon, and each vertex must look the same.
   - Allow three students to each name one key
5. Ask the students: Where in a house or building might you see an example of a tessellation?
6. Ask the students: What did you notice about the tessellation, and why is that important?
7. Ask students: Where might you find other examples of tessellations
8. Remind students to keep an eye out for any they may have in their home. Follow up with students the next class period to see if anyone found tessellations in their home.

**Evaluation**
- Students should evaluate their own work, deciding whether their picture is a design or a tessellation by referring to the definition of a tessellation: a tiling with shapes that cover the plane (page) without gaps or overlaps.
The teacher will then evaluate the students work by having the students individually vocalize to the teacher why their piece of work counts as a tessellation.

- For full points students should include the three “rules” that make it a tessellation.
  - The student can score a total of 6 points. Mastery is 5 points
- Each student will complete the exit slip (*Reproducible G*). Mastery is 3 out of 4.

<table>
<thead>
<tr>
<th>Points</th>
<th>Rule 1: Gaps/Overlaps</th>
<th>Rule 2: Polygon</th>
<th>Rule 3: Vertex</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>The student mentions that there are no gaps or overlaps.</td>
<td>The student uses the term polygons.</td>
<td>The student uses the term vertices.</td>
</tr>
<tr>
<td>1</td>
<td>The student describes the absence of white space, but does not use the terms gaps or overlaps.</td>
<td>The student describes the shapes used properly, but does not use the term polygon.</td>
<td>The student describes the point where lines of the shapes meet, but does not use the term vertex.</td>
</tr>
<tr>
<td>0</td>
<td>The student does not mention gaps or overlaps.</td>
<td>The student does not mention polygons.</td>
<td>The student does not mention vertices.</td>
</tr>
</tbody>
</table>

**Total Points:** 6
Reproducibles

Reproducible A

Tessellation

A pattern of shapes that fit perfectly together!

A **Tessellation** (or **Tiling**) is when we cover a surface with a pattern of flat shapes so that there are no overlaps or gaps.

**Examples:**

- Rectangles
- Octagons and Squares
- Different Pentagons

*(Accessed from: [http://www.mathsisfun.com/geometry/tessellation.html](http://www.mathsisfun.com/geometry/tessellation.html))"
Regular Tessellations

A regular tessellation is a pattern made by repeating a regular polygon.

2D Regular Polygons

Regular Polygons: A polygon is a plane (2D) shape with straight sides. To be a regular polygon all the sides and angles must be the same.

Triangle - 3 Sides  Square - 4 Sides  Pentagon - 5 Sides
Heptagon - 7 Sides  Octagon - 8 Sides  Hexagon - 6 sides

http://www.mathisfun.com/shape.html
Regular Tessellations

Triangles  Rectangles  Hexagons

Things to Remember:

There are three simply rules that must be followed:

- No gaps or overlaps.
- Must use ONE type of REGULAR polygon
- Each vertex must look the same.
Reproducible E

Reproducible F
Regular Tessellations Exit Slip

1. Choose which image below is a regular tessellation:

   a)  

   b)  

   c)  

2. Choose which of the following polygons can NOT be used to create a regular tessellation.

   a) rectangle

   b) triangle

   c) pentagon

3. More than one type of polygon can be used in a regular tessellation.

   a) true

   b) false

4. Give ONE example of a tessellation found in the “real world”.

   ____________________________________________________________

Figure 5: Mathematics Lesson Two – Tessellation Creations
Mathematics Lesson Three: 5th Grade

Quadrilaterals: The Art of Four

Objectives

- Students will distinguish between quadrilaterals, scoring 7 out of 9 on the exit slip.
- Students will use shapes to create a piece of artwork featuring quadrilaterals, scoring 9 out of 12 points on the rubric.

Connection to Standards

Mathematics Standard:

The objectives listed above align with the Core Content standard listed below because students will use their knowledge of categories of two-dimensional figures to determine which shapes fit into specific categories, and are able to classify those shapes according to specific properties.

CCSS.MATH.CONTENT.5.G.B.3
Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.

CCSS.MATH.CONTENT.5.G.B.4
Classify two-dimensional figures in a hierarchy based on properties.

Visual Arts Standard:

The objectives listed above align with the standard listed below because students will be required to demonstrate quality craftsmanship when creating a piece of artwork featuring quadrilaterals.

KENTUCKY STATE STANDARD VA:Cr2.2.5
Demonstrate quality craftsmanship through care for and use of materials, tools, and equipment.

Resources

Video: Hierarchy of Shapes
Activity Inspiration

Reproducible A: Types of Quadrilaterals

Reproducible B: Types of Quadrilaterals Notes Sheet

Reproducible C: Quadrilateral Visual Arts Activity Example

Reproducible D: Types of Quadrilaterals Exit Slip

Procedures / Strategies

Scenario:
Do you have a lucky number--a number that seems to really work for you? For quadrilaterals that number is four. Today you’ll get to learn about the different types of quadrilaterals and even create your own piece of artwork featuring quadrilaterals.

Guided Practice:
1. Show the Hierarchy of Shapes (Quadrilaterals) YouTube video.
2. Begin with a short introduction to quadrilaterals. Utilize Reproducible A to expand on the quadrilaterals highlighted in the video.
   - Ask the students if they remember any of the quadrilaterals from the video.
     - Allow the students to name the quadrilaterals they remember.
   - After naming and describing each quadrilateral, demonstrate how to draw the quadrilateral on the board.
     - If all students are already familiar with the different types of quadrilaterals, call on different students to demonstrate drawing each quadrilateral on the board.
   - Students should fill out the types of quadrilaterals worksheet (Reproducible B) as the quadrilaterals are introduced.
3. Introduce visual art assignment.
4. Allow students to complete visual art assignment.
5. Once students have completed the visual art assignment they should complete the exit slip (Reproducible D).
6. End class by allowing a few students to share their quadrilateral artwork.
   - Ask the students to point out which quadrilaterals were used.
Product Created:

Students will create a piece of artwork featuring two different quadrilaterals. The artwork will also feature one base color, two shades, and two tints of that color.

Materials:
- 8.5” x 11” Paper
- Acrylic Paint – Assorted Colors
- Black Crayons
- Black and White Acrylic Paint
- Paint Brushes
- Graphite Pencils

Procedure:
4. Show the sample artwork, Reproducible C.
5. Introduce the assignment:
   - Students must choose two different quadrilaterals to work with.
   - In pencil, the student must draw one quadrilateral in the center of the page, taking up about half the height of the paper.
   - The quadrilaterals within the center shapes should be half the size of the quadrilaterals on the outside of the center shape.
   - Students will choose ONE color to use (i.e., red, orange, yellow, blue, green, purple, pink).
   - The student will add different amounts of white to the color to make tints and different amounts of black to the color to make shades.
   - The student will then paint each section of the artwork different tints and shades.
   - Once the painting is finished and dry, students will use a black crayon to outline all the quadrilaterals.
6. Provide guidance when needed.
### Assessment / Evaluation

- Each student will complete the exit slip (*Reproducible D*). Mastery is 3 out of 4. Utilize *Reproducible A* as an answer key.
- The teacher will evaluate the student work according to the following rubric. Mastery is 9 out of 12 points.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>0 points</th>
<th>1 point</th>
<th>2 points</th>
<th>3 points</th>
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<tbody>
<tr>
<td>Use of Materials</td>
<td>The student shows no craftsmanship or understanding of the materials used.</td>
<td>The student shows little craftsmanship and little to no understanding of the materials used.</td>
<td>The student shows adequate craftsmanship and an adequate understanding of the materials used.</td>
<td>The student shows excellent craftsmanship and a solid understanding of the materials used.</td>
</tr>
<tr>
<td>Work Habit</td>
<td>The work of art is incomplete. There is no attention to detail and/or evidence of time spent on the project.</td>
<td>It is unclear how mindfulness informed the creative process. The artwork would benefit from more time and effort.</td>
<td>The artwork could benefit from some additional attention, but is overall well thought out and put together.</td>
<td>The artwork is well thought out and put together. The student spent adequate time to plan and carry out the assignment.</td>
</tr>
<tr>
<td>Use of Color-Tints</td>
<td>The student does not use any additional tints of the base color.</td>
<td>The student uses one additional tint of the base color.</td>
<td>The student uses two additional tints of the base color.</td>
<td></td>
</tr>
<tr>
<td>Use of Color-Shades</td>
<td>The student does not use any additional shades of the base color.</td>
<td>The student uses one additional shade of the base color.</td>
<td>The student uses two additional shades of the base color.</td>
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</tr>
<tr>
<td>Use of Color-Base</td>
<td>The student uses more than one base color.</td>
<td>The student uses a single base color.</td>
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<tr>
<td>Use of Black Crayon</td>
<td>The student does not outline the quadrilaterals in black crayon.</td>
<td>The student uses black crayon to outline the quadrilaterals.</td>
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</table>

Points Possible = 12  
Total Points Earned: /12
Types of Quadrilaterals

Quadrilateral
any shape with exactly 4 sides

Trapezoid
any quadrilateral with only one pair of parallel sides

Isosceles Trapezoid
a trapezoid with equal legs

Parallelogram
A quadrilateral with opposite sides parallel

Rhombus
A parallelogram with all sides equal

Rectangle
A parallelogram with four right angles

Square
A parallelogram with four right angles

Kite
A quadrilateral with two sets of congruent sides, neither of which is parallel
Types of Quadrilaterals

Quadrilateral
any shape with exactly 4 sides

Kite
A quadrilateral with two sets of congruent sides, neither of which a parallel

Trapezoid
any quadrilateral with only one pair of parallel sides

Parallelogram
A quadrilateral with opposite sides parallel

Isosceles Trapezoid
a trapezoid with equal legs

Rhombus
A parallelogram with all sides equal

Rectangle
A parallelogram with four right angles

Square
A parallelogram with four right angles

Additional Notes:
Reproducible C
Reproducible D

Exit Slip

Name __________________________  Date ___________

Fill in the missing information: There are three (3) missing types of quadrilaterals, two (2) missing descriptions, and three (3) missing images.

Quadrilateral

Kite
A quadrilateral with two sets of congruent sides, neither of which a parallel

Parallelogram

A parallelogram with all sides equal

A parallelogram with four right angles

Isosceles Trapezoid
a trapezoid with equal legs

Square
A parallelogram with four right angles

Figure 6: Mathematics Lesson Three - Quadrilaterals: The Art of Four
Conclusion

The previous three lesson plans have been created in order to provide educators with reliable lesson plans that demonstrate the integration of mathematics with visual art. Although the end products vary in focus, each lesson gives students the opportunity to clarify their thoughts and ideas, and use art to represent ideas through the creation of a piece of artwork. The inclusion of specific learning objectives based off of local standards and rubrics for each art assignment allows instructors to easily assess student learning. Additionally, each lesson utilizes an exit slip in order to aid in instructor assessment of student progress. Through teaching strategies such as the use of visuals, choice-based learning, and discussion, students are encouraged to think more critically and utilize their creativity.

The following chapter contains lesson plans which focus on integrating science with a component of art education. These lesson plans demonstrate the integration of art with the specific topic, astronomy. In lesson one the specific focus is the effects of the sun on objects on the earth, with a focus on differences in light during each of the seasons. For lesson two the focus is rocket engineering, and for lesson three the focus is celestial bodies in our solar system. As with the previous lesson plans, a variety of activities and artistic processes are implemented within each lesson plan.
CHAPTER V
Introduction

Chapter V is composed of lesson plans which focus on integrating science with a component of art education. The common theme for these lesson plans is a focus on astronomy. In lesson one the specific focus is the effects of the sun on objects on the earth, with a focus on differences in light during each of the seasons. For lesson two the focus is rocket engineering, and for lesson three the focus is celestial bodies in our solar system.

Lesson one introduces student to the four seasons. Students will use their knowledge to recognize the different seasons in images of haystacks by Monet, and to discuss the effect different seasons have on that specific subject matter. The students will work together as a class to create a collaborative piece of artwork featuring Stacks of Wheat by Claude Monet. Each student will re-create a 4” by 4” section of the painting using colored pencils and cardstock.

Lesson two will introduce students to the design process used by engineers and allow students to use utilize their knowledge of criteria for a successful rocket in order to plan and sketch ideas for rocket designs. Students will then have the opportunity to create three sketches of ideas for rockets. As has been done in some of the previous lessons, students are given the option to choose a medium, rather than setting a required medium, allowing students the opportunity to take charge of their learning.

For lesson three, students will utilize their knowledge of the solar system in order to represent objects which are a part of our solar system in a piece of artwork. In this
lesson, students are challenged to combine their understanding of atmospheric perspective with their knowledge of the solar system in order to more accurately represent the distance between objects in our solar system in a piece of artwork.

When compared to integration with other subject areas, integrating art with science may seem like a more natural method of integration for some.

As stated by Rebecca Alberts (2008), Art and science are intrinsically linked; the essence of art and science is discovery. Both artists and scientists work in a systematic but creative way — knowledge and understanding are built up through pieces of art or a series of labs. In the classroom, integrating science and visual art can provide students with the latitude to think, discover, and make connections (para. 1).

Integrating art with science provides students with the opportunity to build knowledge in both content areas through a series of related activities which allow the student to discover connections between the two content areas.
Science Lesson One: 1st Grade

Shedding Light on the Seasons

Objectives

- Students will compare the amount of daylight in the winter to the amount in the spring or fall, scoring 8 out of 12 on the rubric.
- Students will create a 4” x 4” section of Claude Monet’s painting, *Stacks of Wheat*, as part of a collaborative re-creation, scoring 7 out of 9 on the rubric.

Connection to Standards

Science Standard:

The objectives listed above align with the content standard listed below because students will use their knowledge of seasons to recognize the different seasons in different pieces of artwork by Monet, and are able to discuss the effect different seasons have on the subject matter of the artwork.

*CCSS.SCIENCE.CONTENT.1-ESS1-2*
Make observations at different times of year to relate the amount of daylight to the time of year. [Clarification Statement: Emphasis is on relative comparisons of the amount of daylight in the winter to the amount in the spring or fall.]

Visual Arts Standard:

The objectives listed above align with the visual arts standard listed below because students will use their knowledge of seasons to recognize the different seasons in the images of haystacks by Monet, and are able to discuss the effect different seasons have on that specific subject matter.

*KENTUCKY STATE STANDARD VA:Re7.2.1*
Compare images that represent the same subject.

Resources

Reproducible A: Seasons Worksheet

Website: Introduction to Monet’s Stacks of Wheat Series
Reproducibles B - H were retrieved from the website of the Art Institute of Chicago. These images should be used for educational purposes only.

Reproducible B: Claude Monet, *Stack of Wheat, 1890/91*

Reproducible C: Claude Monet, *Stack of Wheat (Snow Effect, Overcast Day), 1890/91*

Reproducible D: Claude Monet, *Stack of Wheat (Thaw, Sunset), 1890/91*

Reproducible E: Claude Monet, *Stacks of Wheat (End of Day, Autumn), 1890/91*

Reproducible F: Claude Monet, *Stacks of Wheat (End of Summer), 1890/91*

Reproducible G: Claude Monet, *Stacks of Wheat (Sunset, Snow Effect), 1890/91*

Reproducible H: Stacks of Wheat Worksheet

Reproducible I: Stacks of Wheat Answer Key

Reproducibles J – K were edited specifically for use with this lesson plan. The image used is Claude Monet, *Stack of Wheat,* from the website of the Art Institute of Chicago. These images should be used for educational purposes only.


Reproducible J: 20 Section Collaborative *Stack of Wheat Print*
Reproducible K: 35 Section Collaborative Stack of Wheat Print

Procedures

Scenario:

Have you ever seen something, and thought, “So what? What’s the Big Deal? Today we’re going to look at a series of paintings of stacks of wheat. It may sound odd, but these paintings were an important breakthrough in the early 1890s. “So what,” you ask? What is the big deal about stacks of wheat? Take a look and you can decide for yourself.

Guided Practice:

1. The teacher will begin by introducing/ reviewing the seasons.
   - Provide students with Reproducible A to take notes in as the seasons are introduced.
   - Begin by asking the students, “What season are we in right now? How do you know?” Ask the students to raise their hand if they know the answer. Be sure to let them know it is okay if they don’t know the answer, because they will have the opportunity to learn it today.
   - If the students are able to state what the season is, ask another student, “What do you think of when you hear (insert current season)?”
   - If you do not get a correct answer ask the students to give descriptions of the recent weather, animals, and plants they can see outside. Additionally, ask the students what types of clothes they have to wear, and which sports or activities they can participate in during this season. After the students have described the season, inform the students what the current season is called.
   - Introduce or Review the three remaining seasons. On the provided worksheet (Reproducible A) students should draw pictures that will help them remember the different characteristics of each season, such as weather, animals, plants, clothing, and sports common to that season.

2. Show the students Reproducible B. Introduce the painting by telling the students the author, title, and year it was created.
   - Ask the students, “What season do you think it is in this painting?” (It is winter.)
   - Ask students to share ways they know this painting is showing that season shown in the painting is winter.

3. Explain that Claude Monet is an impressionist painter. Painters who paint in the impressionistic style focus on the effects of light and show those effects through
the use of bright and pure colors, short and broken brushstrokes, and shadows and highlights of color (rather than just black shadows or white highlights). Explain that the paintings that will be viewed are unusual for when they were painted because the subject matter would be considered dull or mundane but Monet purposely chose the subject in order to make the differences in light more obvious.

4. Show the students the next image, Reproducible C. Explain that the author, title, and year made are the same for this painting as for the last painting. However, point out that Monet acknowledges the difference by giving this painting the subtitle, “Snow Effect, Overcast Day.”

5. Explain that all the images the students will be seeing today are made around the same time, and are given the same title. Facilitate a discussion:

   - Ask the students, “Why do you think the paintings all have the same name?” (These paintings were intended to be shown together as a series, hence the corresponding titles).
   - Ask the students, “What differences do you see in these first two paintings?” (Possible answers could include: The shadows in Reproducible B seem darker, and the highlights in Reproducible C seem slightly brighter. In Reproducible B the shadow by the wheat stack is made of reds and greens, but is made of mostly greens in Reproducible C.)
   - Ask the students, “What do you notice about the colors used in each painting?” (Encourage the students to look closely and search for similarities and differences in color).
   - Ask the students, “What season do you think is shown in these two paintings?” (It is winter for these two paintings).

6. Explain to the students that the amount of daylight is related to the time of year. Different seasons have more hours of sunlight, while others have less.

   - Ask the students, “Which season has the most sunlight?” (Summer.)
   - Ask the students, “Which season has the least amount of sunlight?” (Winter.)
   - Ask the students, “Which seasons have about the same amount of sunlight?” (Spring and Fall.)

7. Provide the students with Reproducible H, the Stacks of Wheat worksheet. Fill in box 1 for Reproducible B as a group.

   Possible Response:
   
   **Season:** Winter
   
   **Description of Light:** The colors used to represent the light are dull. Even the white of the snow is dull, making it seem as if there is not much light. The sky is dull gray, instead of bright with color.
8. Ask the students to fill in the box for *Reproducible C* on their own.

9. Show the students the rest of the paintings, *Reproducibles D through G* one at a time.
   - Briefly discuss the use of light in each painting.
   - Do not discuss the season, the student should be given the chance to think critically in order to determine the season for each.
   - Give the students one to two minutes to fill in the corresponding box once you have introduced the painting.

10. Introduce the visual art assignment.

11. Allow students to complete visual art assignment.

12. End class by reviewing the seasons. Allow one student to name a season, followed by two students who get to describe something about that season. Repeat until all four seasons have been reviewed.
The student will work together as a class to create a collaborative piece of artwork featuring *Stacks of Wheat* by Claude Monet. Each student will re-create a 4” by 4” section of the painting using colored pencils and cardstock. After each student has finished a section, the sections will be presented together as a collaborative piece of artwork.

Each student’s section should represent their assigned piece of the painting. Refer to **Reproducibles J and K** when assigned students a section.

- The images are divided into sections with each row labeled with a number. Additionally, each column should be labeled with a letter, beginning with A. For example, the first square on the first row is considered A1, with the square directly below it considered B1.
- **Reproducible J** is split into 20 sections for smaller classes while **Reproducible K** is split into 35 sections for larger classes.
- If there are more sections than students available, assign students who complete their section early an additional section to complete.

It is recommended that one copy of **Reproducible B** is printed (on paper that is at least 8.5” by 11”) and provided to each table of students.

Each student should be provided with a printout of their section that is at least 2” by 2”.

- If printed on 8.5” by 11” paper, the sections on **Reproducible J** will be large enough, but **Reproducible K** will need to be printed on a larger paper size.

**Suggested Materials:**

- Light colored cardstock (white / cream)
- Colored Pencils – various colors
Assessment / Evaluation

- The *Stacks of Wheat* worksheet (*Reproducible H*) will be evaluated for completion for each section except the first section which was done as a class. The worksheet is worth a total of 12 points.
  - Each section is worth 2 points (1 point for the season and 1 point for the description), for a total of 10 points.
  - 2 additional points are possible for answering the questions at the bottom of the worksheet—one point per question.
  - See answer sheet (*Reproducible I*) for the correct answers.

- Student artwork will be individually assessed based off the criteria provided in the following rubric. Mastery is 7 out of 9 points.

<table>
<thead>
<tr>
<th>Project Outcome Criteria</th>
<th>0 points</th>
<th>1 point</th>
<th>2 points</th>
<th>3 points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of Materials</td>
<td>The student shows no craftsmanship or understanding of the materials used.</td>
<td>The student shows little craftsmanship and little to no understanding of the materials used.</td>
<td>The student shows some an adequate amount of craftsmanship and understanding of the materials used.</td>
<td>The student shows excellent craftsmanship and a solid understanding of the materials used.</td>
</tr>
<tr>
<td>Work Habit</td>
<td>The work of art is incomplete. There is no attention to detail and/ or evidence of time spent on the project.</td>
<td>It is unclear how mindfulness informed the creative process. The artwork would benefit from further time and effort.</td>
<td>The artwork could benefit from some additional attention, but is overall well thought out and put together.</td>
<td>The artwork is well thought out and put together. The student spent adequate time planning and carrying out the assignment.</td>
</tr>
<tr>
<td>Assignment Fulfilled</td>
<td>The artwork does not reflect the assigned section of the original painting.</td>
<td>The artwork shows little similarity to the assigned section of the original painting.</td>
<td>The artwork adequately represents the assigned section of the original painting.</td>
<td>The artwork does an excellent job of reflecting the assigned section of the original painting.</td>
</tr>
</tbody>
</table>

Points Possible = 9

Total Points Earned: /9
Listen as the different seasons are introduced. Draw pictures in the box with the name of each season to help you remember the different seasons.
After the paintings are introduced, write what season you think is featured in the painting. Below your answer, describe the use of light in the painting.

<table>
<thead>
<tr>
<th>Stack of Wheat</th>
<th>Stack of Wheat (Snow Effect, Overcast Day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Season:</td>
<td>Season:</td>
</tr>
<tr>
<td>Description of Light:</td>
<td>Description of Light:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stack of Wheat (Thaw, Sunset)</th>
<th>Stacks of Wheat (End of Day, Autumn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Season:</td>
<td>Season:</td>
</tr>
<tr>
<td>Description of Light:</td>
<td>Description of Light:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stacks of Wheat (End of Summer)</th>
<th>Stacks of Wheat (Sunset, Snow Effect)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Season:</td>
<td>Season:</td>
</tr>
<tr>
<td>Description of Light:</td>
<td>Description of Light:</td>
</tr>
</tbody>
</table>

How does the amount of light in the winter compare to the amount of light in the spring or fall? Answer the following questions. (1 point per question.)

Which season do we notice the most light throughout the day? __________________

Which season do we notice the least amount of light throughout the day? ____________
The season **must** match the season provided on the answer key. Evaluate the answers for “Descriptions of Light” in relation to what is present in the painting. For example, if the student says “It is not very bright” for *Stack of Wheat* it would be correct, but the same answer would not apply to *Stacks of Wheat (End of Summer)* or *Stacks of Wheat (End of Day, Autumn)*.

<table>
<thead>
<tr>
<th>Stack of Wheat</th>
<th>Stack of Wheat (Snow Effect, Overcast Day)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Season:</strong> Winter</td>
<td><strong>Season:</strong> Winter</td>
</tr>
<tr>
<td><strong>Description of Light:</strong></td>
<td><strong>Description of Light:</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stack of Wheat (Thaw, Sunset)</th>
<th>Stacks of Wheat (End of Day, Autumn)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Season:</strong> Winter</td>
<td><strong>Season:</strong> Autumn / Fall</td>
</tr>
<tr>
<td><strong>Description of Light:</strong></td>
<td><strong>Description of Light:</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stacks of Wheat (End of Summer)</th>
<th>Stacks of Wheat (Sunset, Snow Effect)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Season:</strong> Summer</td>
<td><strong>Season:</strong> Winter</td>
</tr>
<tr>
<td><strong>Description of Light:</strong></td>
<td><strong>Description of Light:</strong></td>
</tr>
</tbody>
</table>

How does the amount of light in the winter compare to the amount of light in the spring or fall? Answer the following questions. (1 point per question.)

Which season do we notice the most light throughout the day? **Summer**

Which season do we notice the least amount of light throughout the day? **Winter**
Reproducible K

Figure 7: Science Lesson One – Shedding Light on the Seasons
Science Lesson Two: 3rd Grade

Design: It’s Not Rocket Science!

Objectives

- Students will recognize limitations in engineering design that may impact project designs, scoring 6 out of 8 on the rubric.
- Students will draw three sketches of designs for rockets, scoring 9 out of 12 on the rubric.

Connection to Standards

Science Standard:
The objectives listed above align with the content standard listed below because students will utilize their knowledge of criteria for a successful rocket in order to plan and sketch ideas for rocket designs.

CCSS.SCIENCE.CONTENT.3-5-ETS1-1
Students who demonstrate understanding can define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.

Visual Arts Standard:
The objectives listed above align with the visual arts standard listed below because students will work individually to create sketches/diagrams of rocket ships, in order to help students realize the importance of planning and design in engineering.

KENTUCKY STATE STANDARD VA:Cr2.3.3
Individually or collaboratively construct representations, diagrams, or maps of places that are part of everyday life.

Resources

NASA “What is a Rocket” Website

Reproducible A: NASA's Saturn V Rocket
Reproducible B: NASA Space Shuttle

Reproducible C: Thor-Able Shuttle

Reproducible D: Delta II Rocket

Reproducible E: Delta IV Heavy Rocket

Reproducible F: Atlas Agena - The docking target for Gemini spacecraft

Reproducible G: Mercury Atlas being prepared for launch

Reproducible H: Mercury Atlas launching John Glenn into orbit

Reproducible I: The Design Process

Reproducible J: Small Scale Rocket Models
Procedures

Scenario:
Do you ever wonder how people ever made it to the moon when it is so far away? Or maybe you already know they use rockets to get into outer space. But did you know it took hundreds of years of practice to make a rocket that could take people to the moon? Today you’ll get to see just a small part of what goes into making a rocket that is ready to go into space by designing your own rocket!

Guided Practice:

13. The teacher will explain what a rocket is.
   - Ask the students, “What is a rocket?” (Follow up question may be, “What is a rocket used for?”)
   - A rocket is a vehicle that uses an engine, which is most often launched into space.
   - Show images of rockets (Reproducibles A - H) to demonstrate that rockets vary in size and shape.
   - Explain that rockets may have different jobs like taking people and supplies to the International Space station, or exploring the solar system.

14. The teacher will facilitate discussion among the students.
   - First ask the students, “When do you think the first rocket was made?”
     - The first rockets were used in China in the 1200s. These rockets were very different from the rockets we know now and were used for fireworks.
   - Next, ask the students, “When did a rocket that had people in it first go to the moon?”
     - The first manned rocket on the moon landed in 1969.
     - Show Reproducible A, the Saturn V rocket that carried the first men to the moon.

15. Show the students Reproducible I, the design process.
   - Explain that before a rocket can go to space, someone has to design and test it first.
   - Ask the students, “You get to go to the moon, but the engineers and scientists tell you they haven’t made sure the rocket will work yet. What would you be thinking when they told you this?”
   - Explain that rockets have to be tested first to make sure they will work as planned. After they are tested, the design is updated to fix any problems that kept the rocket from working properly.
Explain that scientists and engineers may have to repeat the design process hundred, or even thousands of times before they have a design that will work properly.

Ask students, “**What do you think a scientist or engineer needs to be able to test a rocket?**”

- Encourage answers such as knowledge of things that have worked in the past, time, money, and materials.
- Explain that testing rockets can be very expensive and time consuming because of the need for experts in the field, as well as expensive materials to create models that can be tested.
- Show the students *Reproducible J*, models of rockets.

16. Introduce visual art assignment.
17. Allow students to complete visual art assignment.
18. Once students have completed the visual art assignment they should complete the exit slip (*Reproducible K*).
19. End class by allowing a few students to share their rocket sketch that they feel is the most successful or most realistic.

**Product Created:**

Each student will create three sketches of ideas for rockets.

- The sketches should be based off examples shown in class.
- Each sketch should represent a different design of rocket.
- Students should sketch the designs in pencil before using additional materials to add color.

Students have artistic freedom in the colors and materials used to complete the project.

**Suggested Materials:**

- White Copy Paper
- Colored Pencils – various colors
- Markers – various colors
- Crayons – various colors
- Graphite pencils

**Assessment / Evaluation**

- The exit slip is worth 8 points. 6 out of 8 points is mastery.
  - See *Reproducible K* for the exit slip and *Reproducible L* for the answer key.
The teacher will assess each student’s sketches according to the following project outcome criteria. Mastery is 9 out of 12 points.

<table>
<thead>
<tr>
<th>Project Outcome Criteria</th>
<th>0 points</th>
<th>1 point</th>
<th>2 points</th>
<th>3 points</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Use of Materials</strong></td>
<td>The student shows no craftsmanship or understanding of the materials used.</td>
<td>The student shows little craftsmanship and little to no understanding of the materials used.</td>
<td>The student shows some an adequate amount of craftsmanship and an adequate understanding of the materials used.</td>
<td>The student shows excellent craftsmanship and a solid understanding of the materials used.</td>
</tr>
<tr>
<td><strong>Work Habit</strong></td>
<td>The work of art is incomplete. There is no attention to detail and/or evidence of time spent on the project.</td>
<td>It is unclear how mindfulness informed the creative process. The work would benefit from further time and effort.</td>
<td>The artwork could benefit from some additional attention, but is overall well thought out and put together.</td>
<td>The artwork is well thought out and put together. The student spent adequate time planning and carrying out the assignment.</td>
</tr>
<tr>
<td><strong>Assignment Fulfilled</strong></td>
<td>The sketches are not of rockets or do not appear to represent rockets.</td>
<td>The sketches appear to be of rockets, but are not based off the images shown in class.</td>
<td>The sketches are of rockets and are mostly based off the images shown in class.</td>
<td>The sketches are of rockets and are based off the images shown in class.</td>
</tr>
<tr>
<td><strong>Number of Designs/Sketches</strong></td>
<td>The student does not make an effect to complete three different designs.</td>
<td>The student completes three different sketches, but all three are of the same design.</td>
<td>The student completes three different sketches, but only two are different designs.</td>
<td>The student completes three different sketches, with three different designs.</td>
</tr>
</tbody>
</table>

Points Possible = 12

Total Points Earned: /12
Reproducibles

Reproducible A

Reproducible B
Reproducible G

Reproducible H
Reproducible K

Rocket Design

Name ______________________ Date ______________

1. Draw a diagram showing the following steps of the Design Process in order: Record Data, Build, Analyze Results, Test, Design. (5 points)

2. List two limitations an engineer or scientist may face when designing a rocket. (2 points)

_________________________________________________________________
_________________________________________________________________

3. List one use of a rocket. (1 point)

_________________________________________________________________
1. Draw a diagram showing the following steps of the Design Process in order:
   Record Data, Build, Analyze Results, Test, Design. (5 points)

   *The diagram must show that the process is a cycle, and is not linear.

2. List two limitations an engineer or scientist may face when designing a rocket. (2 points)

   Answers may include: time, money, knowledge, workers, materials, etc.

3. List one use of a rocket. (1 point)

   Answers may include: taking people to space, taking supplies to space, or exploring the solar system.

Figure 8: Science Lesson Two - Design: It’s Not Rocket Science!
Science Lesson Three: 5th Grade

Phenomenal Planetary Perspective

Objectives

- Students will explore the NASA Solar System Exploration Website in order to summarize information about the Solar System, scoring 6 out of 8 points the exit slip.
- Students will represent distance between objects in our solar system in a piece of art through the use of atmospheric perspective, scoring 9 out of 12 on the rubric.

Connection to Standards

Science Standard:
The objectives listed above align with the content standard listed below because students will utilize their knowledge of the solar system in order to represent objects which are a part of our solar system in a piece of artwork.

CCSS.SCIENCE.CONTENT.5-ESS1-1.
Support an argument that differences in the apparent brightness of the sun compared to other stars is due to their relative distances from Earth. [Assessment Boundary: Assessment is limited to relative distances, not sizes, of stars. Assessment does not include other factors that affect apparent brightness (such as stellar masses, age, stage).]

Visual Arts Standard:
The objectives listed above align with the visual arts standard listed below because students will utilize atmospheric perspective in order to more accurately represent the distance between objects in our solar system.

KENTUCKY STATE STANDARD VA:Re8.1.5
Interpret art by analyzing characteristics of form and structure, contextual information, subject matter, visual elements, and use of media to identify ideas and mood conveyed.

Resources

Reproducibles A – F: Landscape Images

Reproducible G: Earth from the Horizon of the Moon
Scenario:
Do you ever wonder why the moon, stars, and sun seem so far away? Have you ever thought about how you know which of them is the closest to us here on Earth? After learning what factors may affect how we see objects in the sky, you will be able to create your own piece of artwork that showcases this phenomenon!

Guided Practice:

1. The teacher will begin by reviewing atmospheric perspective.
   - A PowerPoint with images such as Reproducibles A – E listed for discussion.
2. The teacher will facilitate discussion among the students.
   - First ask the students to talk about the colors they notice. Ask questions such as, “Why do the hills in the distance appear bluer?” “Are they really a different color than the ones that are closer to us?”
   - Discuss that if you were to hike over to the hills in the distance they would be just as green as the ones in the foreground.
Ask the students to hypothesize what makes the hills in the distance appear bluer.

Ask the students to talk about the value they notice. Remind students that value means how light or dark something is.

3. Show the students Reproducible F.
   - Ask the students, “What appears to happen to the hills that are further in the distance?” (They get lighter as they get farther away.)
   - Ask students to speculate why the hills get lighter as they get further away.

4. Using the selection of landscape photographs to look at. Facilitate another discussion regarding the collection of photographs
   - Ask the students, “Do all the images seem to follow the same rule?”
   - Ask the students, “Do things closer seem darker and more colorful?”
   - Ask the students, “Do things further away always seem lighter and less colorful?”

5. Instruct students that this effect is known as ‘Atmospheric Perspective’. Things appear to fade off into the distance because of dust, humidity and air pollution in the atmosphere. Things in the foreground seem larger than those that appear in the background.

6. Continue to expand- Similar to the effect of atmospheric perspective is the appearance of stars in the sky. One star in particular is especially large.
   - Ask the students if we have any stars in our solar system. (Yes- we have the sun!)
   - Ask the students if there are any other stars in our solar system. (No. The sun is the only star in our solar system.) While the sun is the only star in our solar system, it is one of about 200 billion stars in the Milky Way galaxy. Just like their class is only one class in the school, the solar system is only one solar system in the galaxy. There are many other solar systems similar to, but also very different from ours. Our solar system is unusual because other systems usually have at least two stars!

7. Discuss with the students why we can see other stars if only one is in our solar system. (Other stars are likely just as big as, or bigger than our sun; however, they are so far away they appear tiny compared to the sun. The Sun looks bigger and brighter than any other star because it is closer to Earth. Its brightness means that we can see it, even though it is far away.)

8. Show pictures of the solar system featuring multiple bodies, Reproducibles G – K. Facilitate discussion on the appearance of each body. Ask students to use evidence to defend their reasoning.
   - Which body appears closer to the viewer?
Which body appears to be larger?

9. Allow the students to explore the NASA website to become familiar with the different bodies present in the Solar System. Students should complete the exit slip as they explore.

10. Introduce visual art assignment.
11. Allow students to complete visual art assignment.
12. End class by reviewing the definition of atmospheric perspective. Allow students to take turns naming celestial bodies that are present in the Solar System.

**Product Created:**

Each student will create a piece of artwork featuring celestial bodies from The Solar System, with the point of view being from the Earth.

The piece of artwork should reflect correct atmospheric perspective rules, and should accurately represent the body’s position relative to the Earth, and to the other bodies present. For example, if the student presents the sun, the moon, and mars in their artwork, the moon should be closest, followed by mars, and then the sun.

Students have artistic freedom in the colors and materials used to complete the project.

**Suggested Materials:**
- Construction paper – various colors
- White Copy Paper
- Water Color – various colors
- Acrylic Paint – various colors
- Paint Brushes
- Chalk Pastels – various colors
- Oil Pastels – various colors
- Scissors
- Glue
### Assessment / Evaluation

- The exit slip is worth 8 points. Mastery is 6 out of 8 points.
- Student artwork will be evaluated based on the criteria provided in the following rubric. Mastery is 9 out of 12 points.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>0 points</th>
<th>1 point</th>
<th>2 points</th>
<th>3 points</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Use of Materials</strong></td>
<td>The student shows no craftsmanship or understanding of the materials used.</td>
<td>The student shows little craftsmanship and little to no understanding of the materials used.</td>
<td>The student shows an adequate amount of craftsmanship and understanding of the materials used.</td>
<td>The student shows excellent craftsmanship and a solid understanding of the materials used.</td>
</tr>
<tr>
<td><strong>Work Habit</strong></td>
<td>The work of art is incomplete. There is no attention to detail and/or evidence of time spent on the project.</td>
<td>It is unclear how mindfulness informed the creative process. The artwork would benefit from further time and effort.</td>
<td>The artwork could benefit from some additional attention, but is overall well thought out and put together.</td>
<td>The artwork is well thought out and put together. The student spent adequate time planning and carrying out the assignment.</td>
</tr>
<tr>
<td><strong>Assignment Fulfilled</strong></td>
<td>The artwork does not contain any celestial bodies, and/or it is not apparent that the objects are celestial bodies.</td>
<td>The artwork uses celestial bodies, but the number of bodies does not adequately demonstrate atmospheric perspective.</td>
<td>The artwork uses a variety of celestial bodies to adequately demonstrate atmospheric perspective.</td>
<td>The artwork uses a variety of celestial bodies to successfully demonstrate atmospheric perspective.</td>
</tr>
<tr>
<td><strong>Use of Atmospheric Perspective</strong></td>
<td>The student makes no attempt to show differences in size and distance through the use of atmospheric perspective.</td>
<td>The use of atmospheric perspective is attempted but does not show recognizable differences in size and distance.</td>
<td>The use of atmospheric perspective allows for some recognizable differences in size and distance.</td>
<td>The differences in size and distance are made obvious through the use of atmospheric perspective.</td>
</tr>
</tbody>
</table>

Points Possible = 12

Total Points Earned: /

114
Reproducibles

Reproducible A

Reproducible B

Reproducible C
Begin by exploring the section on Earth. Answer the following questions.

1. Where is the Earth in relation to the sun?

2. How big is the Earth relative to the other planets in the Solar System?

Choose another celestial body to explore. Answer the following questions.

3. What is the name of the celestial body?

4. What type of celestial body is it? (Planet, Small Body, Moon, Region, or Star)

5. List 3 facts about the celestial body you chose to explore.

6. The website shows the planets in order from closest to the sun to furthest from the sun. List the planets in that order below:

Figure 9: Science Lesson Three – Phenomenal Planetary Perspective
Conclusion

The previous three lesson plans have been created in order to provide educators with reliable lesson plans that demonstrate the integration of science with visual art. Within each of these lesson plans, students are given the opportunity to create a piece of artwork. Although the final product created differs for each lesson, each lesson requires students to practice the use of at least one type of artistic medium. As is the case with all previous lesson plans, the inclusion of specific learning objectives based off of local standards and rubrics for each art assignment allows instructors to easily assess student learning. Additionally, each lesson utilizes an exit slip in order to aid in instructor assessment of student progress. Through teaching strategies such as the use of student note taking, choice-based learning, non-linguistic representations, discussion, and visuals students are encouraged to think more critically and utilize their creativity.

The following chapter contains lesson plans which focus on integrating social studies with a component of art education. These lesson plans demonstrate the integration of art with the specific topic, astronomy. The common theme for these lesson plans is a focus on geography. In lesson one the specific focus is familiar places at school and the community. For lesson two the focus is the Navajo culture of the American Southwest, and for lesson three the focus is landmarks in the United States. A variety of activities and artistic processes are implemented within each lesson.
CHAPTER VI

Introduction

Chapter VI is composed of lesson plans which focus on integrating social studies with a component of art education. The common theme for these lesson plans is a focus on geography. In lesson one the specific focus is familiar places at school and the community. For lesson two the focus is the Navajo culture of the American Southwest, and for lesson three the focus is landmarks in the United States.

For lesson one, students will use their knowledge of familiar places in the community in order to create a landscape or cityscape. Students will categorize images according to characteristics of the subject matter in order to identify selected images as either a landscape or a cityscape. This lesson requires students to recognize similarities and differences between landscapes and cityscapes. As described by Pitler and Stone (2012), identifying similarities and differences requires students to compare information, sort concepts into categories, and make connections to existing knowledge in order to help make sense of the world.

Lesson two will require students to apply their knowledge of the Navajo tribe in order to understand the importance of and use of weaving in the Navajo community. Students will create a weaving inspired by the colors utilized in historic Navajo weavings. Students will also be required to explain and be able to describe the Navajo peoples’ reasons for creating weavings.

For lesson three, students will analyze the effects landmarks in the United States have on movement and settlement in the United States. In this lesson, students will create
a postcard portraying a significant location within the United States. This lesson will allow the students to exercise responsibility and take control of their learning through independent research. By allowing students the opportunity to choose a landmark and carry out the research independently, teachers allow students to demonstrate responsibility and autonomous learning (McCombs, 2017). Students will complete research to find out more information about the specific landmark of their choice, which will then be used to create a postcard featuring that landmark.

Integrating art with social studies can easily be done with the integration of art history. By focusing on the artwork of a people, especially the purposes, and the historical facts surrounding their artwork, students are automatically exposed to both the social and artistic history of the people.

As stated by Judy Sizemore (2017), because artists respond to and impact the societies in which they live and create, the arts provide a window into other times and places… The arts are a critical component of social studies in addition to being an effective way to teach. At the same time, cultural and historical aspects of social studies are also components of the Arts and Humanities Program of Studies and would provide a depth of cultural context that would enrich the learning in the arts. (p. 1)

By integrating art with social studies, students are exposed to a more in depth study of the history and culture of the people who created the artwork being studied.
Social Studies Lesson One: 1st Grade

Familiar Landscapes

Objectives

- Students will utilize their knowledge of familiar places in the community to create a drawing of either a landscape or cityscape, scoring 3 out of 4 points.
- Students will distinguish between landscapes and cityscapes scoring 8 out of 10 on the exit slip.

Connection to Standards

Social Studies Standard:
The objectives listed above align with the content standard listed below because students will apply their knowledge of familiar places in the community in order to create a landscape or cityscape to describe that familiar place.

BIG IDEA: GEOGRAPHY - 2.19
Students recognize and understand the relationship between people and geography and apply their knowledge in real-life situations.

Primary Skills and Concepts: Locate and describe familiar places at school and the community.

Visual Arts Standard:
The objectives listed above align with the visual arts standard listed below because students will categorize images according to characteristics of the subject matter in order to identify each image as either a landscape or a cityscape.

VA:Re8.1.1
Interpret art by categorizing subject matter and identifying the characteristics of form.

Resources

Reproducible A: Photograph of Arthur’s Seat, Scotland.

Reproducible B: Photograph of St. Thomas, USVI.

Reproducible C: Photograph of the Cliffs of Moher, Ireland.

Reproducible D: Photograph of the Grantham Canal, England, United Kingdom.
**Scenario:**

Human beings affect the world around us in many ways. What would the world look like without people there to change the environment? When you travel you may see some very different views depending on where you are going. Mountains, rivers, seas, tall buildings, small towns, forests, valleys, schools, and businesses are all around us. You may or may not see the same things your friend next to you sees every day. Today you’ll get to learn what a landscape is and see just how differently you and your peers may see when looking at the same things.

**Guided Practice:**

1. The teacher will introduce landscapes and cityscapes.
   - Reproducibles A – E represent landscapes.
     - Ask the students, “What do you see in all of these pictures?”
     - Ask the students, “Where do you think these pictures were taken?”
     - Ask the students, “Where have you been that looks similar to any of the pictures we have looked at?” (Allow the student to point to the picture and explain where they have been.)
• Explain that these images are all pictures of landscapes. Landscapes are images that focus on natural scenery such as rivers, hills, mountains, valleys, rivers, trees, and forests.

  ○ Reproducibles F – J represent cityscapes.

  • Ask the students, “How are these pictures different from the last five pictures we looked at?”
  • Ask the students, “What do you see in all of these pictures?”
  • Ask the students, “Where do you think these pictures were taken?”
  • Ask the students, “Where have you been that looks similar to the last set of pictures we looked at?” (Allow the student to point to the picture and explain where they have been.)

• Explain that these images are all pictures of cityscapes. Cityscapes, unlike landscapes, are images that focus on cities, or other man-made areas.

2. Following the introduction, the teacher will ask each student to draw either a cityscape or landscape of their choice.

  ○ Allow ten to fifteen minutes for the students to complete their drawing.
  ○ The students should not show or tell their peers what they are drawing.

3. Once the students have completed the drawings, advise the students to find other students that have a similar drawing.

  ○ Students must do this without any talking.

4. Once the students are in the groups, allow one student from each group to give the category of their drawings (cityscape or landscape) and tell one to two similarities in the drawings.

5. After completing the activity, each student will complete an exit slip.

Product Created:

Supplies Needed:

  ○ White Copy Paper or Drawing Paper
  ○ Pencils
  ○ Scissors (for Exit Slip)
  ○ Glue (for Exit Slip)

Students will complete an 8.5” by 11” drawing of either a landscape or a cityscape.

  ○ Students should do their best to fill the whole sheet with the drawing.
  ○ Students must use pencil to complete the drawing.
Assessment / Evaluation

- Drawings will be assessed based upon the following criteria. Mastery is considered 3 out of 4 on the rubric.

<table>
<thead>
<tr>
<th>Project Outcome Criteria</th>
<th>0</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Material Used</td>
<td>The student uses a material other than pencil to complete the drawing.</td>
<td>The student uses pencil to complete the drawing.</td>
<td></td>
</tr>
<tr>
<td>Completion of Drawing</td>
<td>Less than ½ the sheet of paper was covered with the drawing.</td>
<td>Around ½ to ¾ of the sheet of paper was covered with the drawing.</td>
<td>Around ¾ up to the whole sheet of paper was covered with the drawing.</td>
</tr>
<tr>
<td>Connection to Cityscapes and Landscapes</td>
<td>The drawing features neither a landscape nor cityscape.</td>
<td>The drawing features either a landscape or cityscape.</td>
<td></td>
</tr>
</tbody>
</table>

Points Possible = 4

- The exit slip will be used to assess the student’s ability to differentiate between cityscapes and landscapes and is worth a total of 10 points. Mastery is considered 8 out of 10 points.
  - See *Reproducible K* for the exit slip and *Reproducible L* for the answer key.
Reproducibles

Reproducible A

Reproducible B
Reproducible E

Reproducible F
Landscape or Cityscape?

Cut out the images below. Paste each image into the correct category.

Landscapes

Cityscapes
Landscape or Cityscape?

Answer Key

Cut out the images below. Paste each image into the correct category.
Social Studies Lesson Two: 3rd Grade

Weave like the Navajo

Objectives

- Students will create a Navajo inspired paper weaving scoring 9 out of 12 on the rubric.
- Students will recognize attributes of the Navajo tribe, scoring 8 out of 10 points on the exit slip.

Connection to Standards

Social Studies Standard:

The objectives listed above align with the content standard listed below because students will apply their knowledge of the Navajo tribe in order to understand the importance and use of weaving in the Navajo community.

BIG IDEA: GEOGRAPHY - 2.19

Students recognize and understand the relationship between people and geography and apply their knowledge in real-life situations.

Visual Arts Standard:

The objectives listed above align with the visual arts standard listed below because students will create a weaving inspired by the colors utilized in historic Navajo weavings. Students will also be able to recognize the Navajo peoples’ reasons for creating weavings.

MA:Pr5.1.3

Exhibit standard use of tools and techniques while constructing media artworks.

VA:Cn11.1.1

Understand that people from different places and times have made art for a variety of reasons.

Resources

Reproducible A: Beginning a Paper Weaving Instructions

Reproducible B: Additional Paper Weaving Instructions

Reproducible C: Weave Like the Navajo Instructional PowerPoint
Scenario:
The United States of America has earned the nickname “the melting pot” due to the variety of cultures present. The Navajo people have a long history in America, and a lasting influence as well. The beautiful weavings created by the Navajo will be cherished for years to come. Get a feel for what a very important part of the Navajo culture is like by creating your own Navajo inspired weaving!

Guided Practice:

1. The teacher will present a PowerPoint covering a brief history of the Navajo tribe, including where they are located, major beliefs, and the Navajo’s uses of weaving.
   o As the students look at pictures of the Navajo people, ask the following questions:
     • What stands out to you about these people?
     • When does it look like these pictures were taken? How can you tell?
     • What do all the pictures have in common?

2. Following the PowerPoint Presentation, the teacher will demonstrate the process of making a paper weaving.

3. The students will each produce a paper weaving inspired by the colors used in Navajo weavings.

4. After completing the weaving, each student will complete an exit slip.

Product Created:

Supplies Needed:
Construction Paper: white, brown, black, blue, yellow, red, and gray
Scissors
Glue

Students should complete the following steps to create a paper weaving:

1. Fold a piece of 8.5 x 11 paper in half hamburger style.
2. With the folded end facing toward you, draw a line 1/2 inch from the top, left, and right sides. See Reproducible A.
3. Move over $\frac{1}{2}$ inch to the right from the line A. Cut a line from the bottom (folded edge) up to line C inch from the top.

4. Continue to cut slits across the paper. Slits should be one inch apart. See Reproducible B, you should cut along the blue lines.

5. Open the piece of paper, there should be slits going across the paper. This paper is like the “warp.”

6. Take one strip of construction paper in your hand. The strips of paper are like the “weft.”

7. Weave the paper strip “weft” over and under the “warp.”

8. Push the weft strip all the way to the top of the construction paper.

9. Alternate beginning over and under each time you begin a row.

10. Continue to weave paper strips, alternating between over/under and under/over.

11. Strips should be pushed together so that there is no space between them.

12. Trim the weft strips so that they don’t hang over the edge of the warp.

13. Glue down the weft strips to the warp.

14. Put your name on the back of your finished product.
**Assessment / Evaluation**

- Paper weavings will be assessed based upon the following criteria. Mastery is considered 9 out of 12 on the rubric.

<table>
<thead>
<tr>
<th>Project Outcome Criteria</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Straightness of Warp Paper</strong></td>
<td>The warp paper is measured and cut with no attention to detail, resulting in crooked lines and edges.</td>
<td>The student measured and cut with little attention to detail, resulting in some straight, but mostly crooked lines and edges, on the warp paper.</td>
<td>The student measured and cut carefully, resulting in mostly straight lines and edges on the warp paper.</td>
<td>The student measured and cut carefully, resulting in straight lines and edges on the warp paper.</td>
</tr>
<tr>
<td><strong>Completion of Weaving</strong></td>
<td>Less than ½ the length of the warp paper was covered with paper strips to create the weaving.</td>
<td>Around ½ the length of the warp paper was covered with paper strips to create the weaving.</td>
<td>Around ¾ the length of the warp paper was covered with paper strips to create the weaving.</td>
<td>The entire length warp paper was covered with paper strips to create the weaving.</td>
</tr>
<tr>
<td><strong>Connection to the Navajo</strong></td>
<td>None of the Navajo Inspired colors are used in the weaving.</td>
<td>Some of the correct colors are used, but the pattern is not pleasing to the eye.</td>
<td>Some of the correct colors are used, and the pattern is pleasing to the eye.</td>
<td>The pattern is very effective and reflects the colors use in Navajo weavings.</td>
</tr>
</tbody>
</table>

**Points Possible = 12**

- The exit slip is worth a total of 10 points. Mastery is considered 8 out of 10 points.
Reproducible C:

1. Who do you think made this?
2. When do you think it was made?
3. What do you think is its purpose?

Who Are the Navajo?
- Native American Tribe
- Call themselves the “Dine” or “Children of God”
- Settled in the Colorado Plateau Centuries before Christopher Columbus landed in the Americas
- Mainly located in Arizona, New Mexico, and Utah
- Arts include weaving, basket making, pottery and jewelry making

Weave like the Navajo
Who Are the Navajo?

Navajo Beliefs
- One must do everything they can to maintain harmony or balance on Mother Earth
- Herbs, prayers, songs, and ceremonies are used to help restore order
- There are more than 90 different kinds of ceremonies that may be used in the Navajo culture
- All are performed at various times for a specific reason
- Some ceremonies last several hours, while others may last as long as nine days.

Navajo Weaving Process
- Looms were very large
- Often took more than one person to use the loom effectively

Wedge Weave Blanket (1880-1885)

Weaving You Can Wear

Storm Pattern Rug (est. 1930)
More Weaving Examples

- What did you notice about the weavings?
  - Colors?
  - Design?
  - Purpose?

Navajo Weavings

Colors:
- Variety of natural dyes used—mainly plants
- Originally: Indigo, Brown, White
- Later: Black, Red, Yellow, Gray, Green

Geometric Patterns

Uses of Weavings

- Usually very large
- Uses:
  - Blankets
  - Rugs
  - Dresses
  - Cloaks

Important Vocabulary

- Weaving: creating a fabric by interlocking long threads horizontally through stationary vertical threads
- Loom: a device used to weave yarn into fabric
- Warp: the vertical threads on a loom over and under which other threads (the weft) are passed to make fabric
- Weft: the horizontal threads on a loom which are passed over and under the warp

You Can Weave like the Navajo!
Reproducible D

Weave like the Navajo

Name ____________________________________________
Date_____________________

1. What is a weaving? (1 point)
   a) Joining loops together to create fabric
   b) Putting horizontal threads through vertical threads to create fabric
   c) Joining fabric together using stitches

2. Name one state the Navajo live in. (1 point) _________________________

3. Draw a line to match the vocabulary word to the correct definition. (3 points)
   a) Loom - the vertical threads
   b) Warp - the horizontal threads
   c) Weft - a device used to weave

4. Name three items the Navajo created by weaving: (3 points)
   1) _________________________
   2) _________________________
   3) _________________________

5. What is one part of the Navajo culture that would be considered different from
   your own culture? (2 point)
Weave like the Navajo Answer Key

1. What is a weaving? (1 point)
   a) Joining loops together to create fabric
   b) Putting horizontal threads through vertical threads to create fabric
   c) Joining fabric together using stitches

2. Name one state the Navajo live in. (1 point)
   Answers may include: Arizona, New Mexico, and Utah

3. Draw a line to match the vocabulary word to the correct definition. (3 points)
   a) Loom - the vertical threads
   b) Warp - the horizontal threads
   c) Weft - a device used to weave

4. Name three items the Navajo created by weaving: (3 points)
   Answers may include: blankets, rugs, and clothing (dresses, cloaks, etc.)

5. What is one part of the Navajo culture that would be considered different from your own culture? (2 points)
   This question should be evaluated based on information presented in the PowerPoint, as well as knowledge of each particular student’s culture.

Figure 11: Social Studies Lesson Two - Weave like the Navajo
**Landmarks in America**

**Objectives**

- The student will explain how a landmark may cause the human populations to change and/or migrate within the United States, scoring 9 out of 12 on the rubric.
- The student will create a postcard featuring one landmark from the United States in the present day, scoring 9 out of 12 on the rubric.

**Connection to Standards**

**Social Studies Standard:**

The objective listed above relates to the following content standard because students will analyze the effects landmarks in the United States have on movement and settlement in the United States.

*SS-05-4.1.1*

Students will use geographic tools (e.g., maps, charts, graphs) to identify natural resources and other physical characteristics (e.g., major landforms, major bodies of water, weather, climate, roads, bridges) and analyze patterns of movement and settlement in the United States.

**Visual Arts Standard:**

The objective listed above relates to the following visual arts standard because students will create a postcard portraying a significant location within the United States.

*VA:Cr2.3.5*

Identify, describe, and visually document places and/or objects of personal significance

**Resources**

**Reproducible A: Weave Like the Navajo Instructional PowerPoint**


**Content:**

There are many landforms in the United States. Landforms are also seen as landmarks, when they are easily seen and recognized. Landforms are affected by the human and physical characteristics that surround them. Landforms may affect the economy of an area by attracting tourists and businesses that cater to tourists.
The students will be provided an extensive list of landforms in the United States:

<table>
<thead>
<tr>
<th>National Landforms</th>
<th>Local / State Landforms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mount McKinley</td>
<td>Mammoth Cave</td>
</tr>
<tr>
<td>Pocono Mountains</td>
<td>Cumberland Plateau</td>
</tr>
<tr>
<td>Bryce Canyon</td>
<td>Lost River Cave</td>
</tr>
<tr>
<td>Glacier National Park</td>
<td>Cumberland Falls</td>
</tr>
<tr>
<td>Sequoia National Park</td>
<td>Great Smoky Mountains</td>
</tr>
<tr>
<td>Yosemite National Park</td>
<td>Land Between the Lakes</td>
</tr>
<tr>
<td>Yellowstone National Park – Hot Springs, Yellowstone Lake, Old Faithful, etc.</td>
<td>Red River Gorge</td>
</tr>
<tr>
<td>Zion National Park – The Colorado Plateau</td>
<td>Lake Cumberland</td>
</tr>
</tbody>
</table>

The above list can be personalized to include more landmarks catered to the local area, as exemplified in the second column for Bowling Green, Kentucky. The list is intended to be used for recommendations, to keep students from spending too much time choosing a landmark. Students should be encouraged to research and choose a landmark, within reason. Utilization of the list will aid in encouraging students to choose quickly and focus on researching one particular landmark.

### Procedures / Strategies

**Scenario:**

We’re going on a class trip, through postcards! The reasons people came to America have changed over time, but one popular reason people come to America is to view the many landmarks throughout the fifty states. All students will create a postcard advertising the landmark of their choice. The postcard should entice the viewer to want to visit the landmark, as well as provide fun facts to keep them interested!

**Guided Practice:**

1. First the students and teacher engage in a discussion.
   
   Teacher: Where is one place you have ever wanted to go, and why? (Students discussed places and reasoning.)
   
   Teacher: When you visit a new place, what is one thing you buy as a souvenir? (Students discuss souvenirs.)
   
   Teacher: Why might someone buy a postcard? (Students discuss reasoning.)
2. Pass out a selection of postcards from landmarks in the United States and discuss the following:
   Teacher: Which of these postcards is the most interesting to you and why?
   (Students hold up the postcard they found most interesting and discussed their reasoning.)
3. Present a PowerPoint that includes landmarks in the United States and pictures featuring those landmarks. As students view the pictures, also give facts about each landmark.
4. Next the students will complete research to find out more information about the specific landmark of their choice. To expedite the research process, have a list of approved resources, and brochures available for student use.
5. Students complete postcards.
6. On a separate sheet of paper, students will explain why they chose the specific landmark and provide a brief (3-5 sentences) history of the landmark. Additionally, the student will include a brief paragraph explaining how the landmark may cause the human populations in the United States to change and/or migrate.

**Product Created:**

Students work individually to create postcards for different landmarks in the United States. Students will be provided with a piece of paper and drawing utensils.

Students should be given the following requirements: the postcard must include three facts about that landmark and an illustration of the landmark. The postcard should be created based upon a typical postcard layout: 2-sided, with an area for the recipient address, and an area for a stamp.

**Suggested Materials:**
- Construction paper – various colors
- White Copy Paper
- Water Color – various colors
- Paint Brushes
- Graphite Pencils
- Markers – various colors
- Colored Pencils – various colors
- Crayons – various colors
The written assignment will be assessed based upon the following criteria. Mastery is considered 9 out of 12 on the rubric.

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choice of Landmark</td>
<td>The student did not include a reason for their choice of landmark.</td>
<td>The student attempts to explain the reason for their choice of landmark, but the explanation is not cohesive or detailed.</td>
<td>The student provides sufficient reasoning for the choice of landmark.</td>
<td>The student put time and effort into choosing a landmark, as is clear from the student’s written reasoning for choice of landmark.</td>
</tr>
<tr>
<td>History of Landmark</td>
<td>The student did not include a history of the landmark.</td>
<td>The history of the landmark was included, but unclear, or incomplete.</td>
<td>The student provides a brief history of the landmark, using less than three sentences.</td>
<td>The student provides a brief, yet complete history of the landmark, using 3+ sentences.</td>
</tr>
<tr>
<td>Effect of the Landmark on Human Population</td>
<td>The student makes no attempt to explain how the landmark may have caused human populations in the United States to change and/or migrate.</td>
<td>The student attempts to explain how the landmark may have caused human populations in the United States to change and/or migrate but it is unclear that any research-based evidence was employed.</td>
<td>The student explains how the landmark may have caused human populations in the United States to change and/or migrate is complete but could use more support from research.</td>
<td>A brief paragraph explaining how the landmark may have caused human populations in the United States to change and/or migrate is complete and based on evidence found in research.</td>
</tr>
<tr>
<td>Grammar</td>
<td>There are more than 4 mistakes in grammar, punctuation, or spelling.</td>
<td>There are 3-4 mistakes in grammar, punctuation, or spelling.</td>
<td>There are 1-2 mistakes in grammar, punctuation, or spelling.</td>
<td>There are no mistakes in grammar, punctuation, or spelling.</td>
</tr>
</tbody>
</table>

Total: / 12
- Postcards will be assessed based upon the following criteria. Mastery is considered 9 out of 12 on the rubric.

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Facts</strong></td>
<td>No facts about the landmark are included.</td>
<td>Includes 1 fact about the landmark.</td>
<td>Includes 2 facts about the landmark.</td>
<td>Includes 3+ facts about the landmark.</td>
</tr>
<tr>
<td><strong>Layout</strong></td>
<td>The postcard is not two sided AND does not follow the typical layout of a postcard.</td>
<td>The postcard is not two sided, OR does not follow the typical layout of a postcard.</td>
<td>The postcard is two sided and mostly follows the typical layout of a postcard.</td>
<td>The postcard is two sided and follows the typical layout of a postcard.</td>
</tr>
<tr>
<td><strong>Illustration</strong></td>
<td>No illustration of the landform is included OR the illustration bears no resemblance to the intended landmark.</td>
<td>An illustration of the landform is included but is not near completion but mostly resembles the intended landmark.</td>
<td>A nearly complete illustration of the landform is included which resembles the intended landmark.</td>
<td>A completed illustration of the landform is included which resembles the intended landmark.</td>
</tr>
<tr>
<td><strong>Grammar</strong></td>
<td>There are more than 4 mistakes in grammar, punctuation, or spelling.</td>
<td>There are 3-4 mistakes in grammar, punctuation, or spelling.</td>
<td>There are 1-2 mistakes in grammar, punctuation, or spelling.</td>
<td>There are no mistakes in grammar, punctuation, or spelling.</td>
</tr>
</tbody>
</table>

**Total:** / 12
Reproducible A

Landmarks in the United States

Mississippi River
- 2nd longest river in North America
- 2,350 miles from its source at Lake Itasca (MN) to the Gulf of Mexico

https://www.nps.gov/miso/naturesfacts.htm
https://www.nps.gov/ark/index.htm

Appalachian Mountains
- The Appalachian Trail is a 2,180-mile long public footpath that covers wooded, pasture, and wild lands of the Appalachian Mountains over 14 states.

https://www.nps.gov/app/index.htm

The Grand Canyon
- Located in Arizona
- 277 river miles long, up to 18 miles wide, up to a mile deep

https://www.nps.gov/gacon/index.htm

Death Valley
- Located in California and Nevada
- Drought and record summer heat
- Towering peaks are frosted with winter snow
- A great diversity of life survives in Death Valley

https://www.nps.gov/deve/index.htm

Ruby Falls
- Waterfall located over 130 feet below the surface of Lookout Mountain in Chattanooga

http://www.rubifalls.com/
Figure 12: Social Studies Lesson Three - Landmarks in America

Glacier National Park
- Located in Montana
- More than a million acres with 700 miles of maintained trails
- Wide variety of plant and animal life

Mammoth Cave
- Located in Kentucky
- The world’s longest known cave system, with more than 400 miles explored

Niagara Falls
- Fast-flowing waters of four of the Great Lakes (Superior, Michigan, Huron, and Erie) into the Niagara River Gorge

Florida Keys
- Home to the United States’s only living coral reef
- Made up of five small island areas

What To Do:
- Research landmarks of interest in the United States
- Choose one landmark
- On a separate sheet of paper, explain why you chose this landmark, provide a brief (5-10 sentence) history of the landmark, and examples of how a landmark may cause people to change and/or migrate.
- Create a postcard for this landmark
  - Postcard must include: front AND back side
  - Must follow the format listed of a postcard
  - Must include:
    - 3 facts about the landmark
    - (drawings) of the landmark
Conclusion

The previous three lesson plans have been created in order to provide educators with reliable lesson plans that demonstrate the integration of social studies with visual art. Within each of these lesson plans, students are given the opportunity to create a piece of artwork, including a drawing, weaving, and a postcard. Each of these lesson plans requires students to use a variety of tools and techniques. As is the case with all previous lesson plans, the inclusion of specific learning objectives based off of local standards and rubrics for each art assignment allows instructors to easily assess student learning. Additionally, each lesson utilizes an exit slip in order to aid in instructor assessment of student progress. Through teaching strategies such as identifying similarities and differences, the use of visuals, student practice, discussion, and choice-based learning, students are encouraged to think more critically and utilize their creativity.
CHAPTER VII

Discussion

Based on the research collected, a series of lesson plans has been developed which incorporate visual arts content and activities with content specific to content area subjects studied in the general education elementary classroom. Included were three lesson plans for each subject: English/language arts, mathematics, science, and Social Studies. The lesson plans were created in order to help answer the research question, “How can one integrate visual arts into a general education classroom, specifically through standards alignment, teaching strategies, and student assessment?” It is the author’s hope that the lesson plans will be a useful resource for any educator hoping to utilize integration in an educational setting.

In an effort to increase the audience of this thesis, each lesson plan was mapped out step-by-step, and designed to be used for anyone, hopefully even those outside of the typical education realm. The layout for these lesson plans was based upon the research contained in this thesis, combined with the author’s experience with other models as exposed to in the pre-service teacher university setting.

As was stated in Chapter II, integration is an approach to teaching through which “students engage in a creative process which connects an art form and another subject area and meets evolving objectives in both” (The John F. Kennedy Center for the Performing Arts, 2010, p. 1). All of the lessons created in conjunction with this thesis were designed to meet a standard for the chosen content area subject as well as a Visual Arts standard. The lesson plans for each subject area were given an overarching theme to provide continuity between each plan. For example, each mathematics lesson plan was
centered on the theme of geometry, while each social studies lesson plan was centered on
the theme of geography. Connecting each lesson plan to state standards gives educators
the confidence that the lessons are relevant and appropriate for use in an educational
setting.

In order to meet the needs of a variety of students, the integration lesson plans
created employ a number of different teaching strategies, such as providing a visual
model, giving students the opportunity to describe and analyze what they are viewing,
and allowing for collaborative learning. For example, in the lesson plan “Shapes! Shapes!
They’re everywhere!” (p. 62), students are provided with a visual model to demonstrate
how to break down complex objects into simple shapes. One of the models used was a
picture of a house that the educator utilizes to point out how the house can be broken
down into squares, rectangles, and triangles. This concept could not otherwise be
conveyed to a group of first graders without the use of a visual model. In this lesson plan,
students are exposed to shapes, which is content that overlaps between mathematics and
visual art. The students are also exposed to a new method of artistic production-- collage.
Creating a collage of shapes provides the students with an additional exposure to the
varying types of shapes, allowing for an opportunity to deepen understanding of the
content. Students are then given the opportunity to vocalize to the teacher which shapes
are used on their collage in order to assess learning of the content. An additional
evaluation through the use of an exit slip allows the teacher to use a different method to
test each student’s comprehension.

In the 3rd grade Social Studies lesson plan “Weave like the Navajo” (p. 143),
students are shown an image of a Navajo woven rug and given the opportunity to
describe and analyze what they are viewing. The image is shown as a bellringer question with no information about the rug given until after students are given the opportunity to speculate about the creator, age, and purpose of the rug. Allowing the students the opportunity to speculate creates interest in the lesson and encourages students to employ their creative thinking skills. Through this lesson, students are introduced not only to the history and culture of the Navajo people, but also to a method of art production common among the Navajo people - weaving. Students are given the opportunity to discuss the historical uses of weaving as well as differences between their own culture and the culture of the Navajo people. Students are then assessed on both contents through the use of an exit slip. Additionally, the paper weavings created by the students are assessed based on specific criteria provided in the form of a rubric. As was explained in Chapter II, rubrics “help the student understand where they are in the development of their work, and help them to become independent learners” (Otis College of Art and Design, n.d., para. 2). The provided rubric will not only be a useful tool for the educator, but for the student as well.

In the 1st grade English/language arts lesson plan, Author, Illustrator, & Dreamer (p. 42), students participate in collaborative learning activity in which they create posters presenting information about Peter H. Reynolds and later present the posters as a group to the class. As quoted in Chapter II, Fung (2013) has said, “Art is particularly powerful when it allows students to communicate learning when they cannot express it through writing. . . . Their work provides evidence that they were able to effectively communicate with each other to understand and complete the assignment” (para. 5). Having students work in groups encourages creativity, problem-solving, and collaborative skills.
Additionally, collaborative learning gives students the opportunity to switch roles and become the teacher for their peers. By encouraging the students to evaluate the messages of the illustrations from a visual arts perspective, as was done in this lesson plan, the students interact with the English content more in depth. By paying particular attention to the illustrations the students will be more likely to understand the story line and major events. For this lesson, students are assessed both individually and in the collaborative groups. Students are assessed individually based on their exit slip, which requires the students to write three (3) sentences describing Peter H. Reynolds and/or his illustrations. The collaborative groups will be evaluated on their group presentations based on criteria specified in the provided rubric.

Within the Review of the Literature, the section “How to Integrate” is particularly useful in answering the research question, “What resources are available for teachers looking to begin the process of visual arts integration?” Within the section, “How to Integrate” the author references a list of criteria educators can use when judging the quality and reliability of an integration resource (Barber 2015). As quoted in Chapter II, Riley (2012) suggests an example of how to integrate visual art and science by connecting the earth's relationship in the galaxy, an understanding of measurement, use of observation skills, and Vincent van Gogh's "Starry Night" painting. Another specific example provided was the integration of art with math through the use of mosaics in order to introduce shapes. Additionally, resources such as The John F. Kennedy Center for the Performing Arts (2017a) are referenced which provide numerous examples of arts integration. Other resources referenced include Kentucky Educational Television (2017) which provides integration activities and lesson plans for use within the elementary
classroom. It is the author’s hope that the information presented in the Review of the Literature will be helpful for any educator to utilize when evaluating possible integration lesson plans.

**Implications**

The twelve (12) integration lesson plans included in this thesis are complete and ready to be implemented in a classroom. Each lesson is purposefully planned with attention to standards alignment, teaching strategies, and student assessment. Educators may use these lesson plans as they are written, or adapt them to fit the specific needs of their classroom. Additionally, the lesson plan format can be used as a starting point for educators interested in creating their own integration lessons. It is the hope of the author that through the use of these lesson plans educators will gain the confidence needed to begin the process of integrating visual art into their classroom.

An outcome of this research could be that educators begin to encourage creativity and problem solving through the implementation of visual arts integration. As discussed in Chapter II, the “arts integration curriculum design gives all students . . . the opportunity to express their creativity and to learn critical-thinking, problem-solving, and innovation skills” (Sloan, 2009, para.6). There is no one correct way to complete an assignment and assignments are often open to interpretation. As quoted in Chapter II, David Rufo (2012) states, “In order for growth and learning to take place, educators must be willing to embrace artistic and creative serendipity” (p. 46). It is the hope of the author that this research will encourage educators to allow students the chance to express themselves and find their voice.
Students who may not otherwise be motivated to learn may be motivated by the opportunity to express themselves through art. As discussed in Chapter II, Ahmet (2016) argues, “It's important to ensure that the students are engaged throughout the process, and that they actually care about learning the content” (para. 8). When students enjoy the learning process they are more likely to be proactive and remain on task. Integrating visual art encourages students to learn and grow through exploration, but it will also challenge students to make connections between subject areas.

Not only is the information found in this research necessary to help educators enable students to gain the educational benefits that art provides, but it is also necessary to introduce art to students who could excel in the subject, possibly leading them to their future careers. As was pointed out in Chapter II, as stated in a report by the National Endowment for the Arts, which uses data from the Bureau of Labor Statistics, job growth in the arts will exceed job growth as a whole by 2018 (as cited in Bradford, 2011). It is the author’s hope that the educators who utilize this research will nurture the talents of all students, as those students will continue on to use their school visual arts experiences in their future careers.

A great deal of planning and preparation was put into creating lesson plans that could be implemented by a variety of educators; this research provides a base from which to encourage collaboration amongst classroom teachers. For schools that have a visual arts instructor, this could simply mean encouraging and uplifting that teacher, or it could be demonstrated by encouraging administrative and parental support of the visual arts. For schools that do not have a visual art instructor this could be shown by teachers working together to ensure students were exposed to visual art in at least one class per
day. This thesis provides the means through which to explain and rationalize the benefits of a visual arts education for all students. In all settings, it would be considered a success if this thesis encouraged a respect and admiration for visual art. Additionally, it is hopeful that through this research, a greater respect for visual art will be encouraged. This could be manifested through the support of local artists, youth art programs, and by individuals getting involved in making their own art. Visual art should be seen as a necessity rather than just to be used as an enrichment activity.

**Limitations**

There are some limitations to consider in relation to the research and lessons presented. First, teachers are restricted in what they are allowed to do on many levels. A teacher may face adversity from parents of students, other teachers, as well as administration. This research can be used as a support for those teachers struggling to communicate the importance of visual art in the classroom, but cannot guarantee the intended results will be achieved.

Additionally, supplies may be a limitation in some situations. The lesson plans that have been prepared for this thesis can be completed with items many elementary classrooms already have; however, items like paint, paper, glue, and other consumables can become costly. Without support from administration, the cost of these supplies could fall upon the classroom teacher.

A third limitation is time. Time is of the essence in all classrooms. It may seem a threat to the already limited time to add in more content; however, the art content is used to reinforce both prior learning and the new content being taught. While it will take
additional time to complete visual arts integration activities, it should not be seen as “wasted” time.

A final limitation to be discussed is instructor knowledge. Teachers will have difficulty aligning lesson plans to visual arts content if they are unfamiliar with the standards. However, as has been outlined throughout this thesis, there are a multitude of resources available to assist general education teachers in the process of integration. Additionally, teachers do not have to be experts in visual arts in order to successfully integrate the content into general education lesson plans.

**Recommendations for Future Instruction**

The research included in this thesis focused on the benefits of exposure to visual art, and how one can integrate visual arts into a general education classroom, specifically through standards alignment, teaching strategies, and student assessment. The research was then used throughout the lesson planning process and impacted the lesson plan format.

As was previously stated, the lesson plan format of the integration lessons included in this thesis can be used as a starting point for educators interested in creating their own integration lessons. Resources highlighted in Chapter II, such as the KET Visual Arts toolkit (Kentucky Educational Television, 2017) and the National Education Association’s website (National Education Association, 2015) can be utilized by educators searching for inspiration for additional lessons. A list of criteria educators can use when judging the quality and reliability of an integration resource was also provided in Chapter II:

1) Arts integration should be connected to a standard.
2) Arts integration projects should reflect learning.

3) Arts integration should involve student choice.

4) Arts integration projects should have specific grading rubrics.

5) Arts integration projects should be shared with others (Barber, 2015, para.2-6).

By using the criteria listed above in addition to the lesson plan format seen in the included lesson plans, educators can adapt integration resources into lesson plans to use in the classroom.

The next steps for research would be for the lesson plans to be put into practice in elementary classrooms. Data could be collected comparing the performance of students in classrooms utilizing visual arts integration with the performance of students in classrooms that do not utilize integration. Another option would be to observe schools that do not have art classes or art teachers and compare the overall performance of those schools as compared to schools that do have visual art classes. Additionally, research could be done to evaluate the differences in perception of visual art with differing degrees of exposure to visual art.

Additional research covering visual art in relation to college and career readiness is recommended. How does the integration of art in elementary school affect student choice in career? Are students who receive more exposure to art also more inclined to go into an art-related career field? Are students who receive more exposure to art generally more prepared for college and careers after high school? These aspects were not specifically covered in this research, but could be of interest for educators.
Lastly, in Chapter II it was stated that no research is currently available showing the actual effect ESSA has on the availability of visual arts classes. As the arts can serve as an asset when applying for federal funding (Education Commission of the States, 2016, p. 3), research could be done to discover if schools retain, and improve students’ exposure to visual arts classes, in order to provide the students with a well-rounded education.

Conclusion

Without art education in the classroom, students would be missing out on important educational benefits. Chip Joseph, a first-grade teacher at South Anna Elementary School, in Montpelier, Virginia has argued, "The arts are an expression of what is real and true. If you don't use the arts to teach, you are separating real life from learning” (as cited in Tilney, 2017, para. 11). The best outcome for art education would be that every student is introduced to art through a designated classroom with a specialized instructor. While the use of a similar practice is ideal, there are ways to combat the loss of art classes to retain some of the benefits that the visual arts provide to students. The integration of art can exist without any change to curriculum, allowing for a smooth transition into integration from existing teaching practices. The willingness of teachers and Boards of Education to integrate art into existing curricula affects the future of art education greatly. Not only is it necessary to help allow students to gain much needed educational benefits, but it is also necessary to introduce art to students who could excel in the subject, possibly leading them to their future careers. Should an educator choose to implement the integration of visual arts into the existing general education curricula, the results would be beneficial for all students.
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