

Energy Woven Into Art

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This curriculum unit is recommended for: 4th Graders in an Elementary Art Class

Keywords: Art, Weaving, Abstract Art, Kinetic Energy,

Teaching Standards: See <u>Appendix 1</u> for teaching standards addressed in this unit.

Synopsis: By the end of this unit I hope to have successfully woven energy into art, without losing the essence of art. The main purpose of this unit is to have students understand that a variety of subjects relate to one another, and that some things cannot occur without the help of others. Creating individual weaves through a series of mini art lessons and science experiments, and then connecting each student's individual weave into one large masterpiece represents this concept. Within this unit I emphasize that we can create art without the use of kinetic energy but if we use magnetic or electrical energy within the process, our art gets transformed to a different level of thinking and creation. This unit demonstrates integration, collaboration, creativity and risk taking, which will ensure students to learn 21st century skills and college readiness skills. Through this integration of subjects, students will not only become well-rounded students but also build necessary qualities that are demanded in today's workforce. To teach a lesson about process and technique of weaving in the art room can be a good lesson, but to teach an art lesson about the complexity of weaving by way of science and history, is what makes a great art lesson.

I plan to teach this unit during the coming year in 2014-2015 to approximately 100 students in 4th grade Art class.

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Introduction

Throughout this unit, each student will have the opportunity to research textiles, discover their own opinions about energy consumption, and learn about industries that incorporate fibers into their art. The main goal is to weave the science of energy into an art lesson.

Before reading any further into this unit, I feel as though one should know some background information on when I teach, and for how long. I am an Elementary Art Educator who teaches twenty-nine different classes a week. These twenty-nine classes include grades kindergarten through fifth, and a self-contained class of students with Autism. On average, a class will attend art for thirty-five minutes a week. My unit is written based off of this scheduling and thus, the reason it will take weeks for it to be a completed lesson. Another way of looking at how much time I have to work with, is if I was doing it seven days in a row for thirty-five minutes a day.

This unit is written based off of fourth grade Art, Science, and Social Studies standards that could be altered for third or fifth grades. I chose fourth grade because in science class they really "dig deep" into the way energy is created and used, which will advocate for the students to make connections between their art, science and social studies classes. It is important for the students to first learn the art components, and the science and history components will work as an enhancement for the lesson, giving the overall unit integration and real world understanding.

Objectives

Teacher Objective

My objective for this unit is to integrate a quality science lesson into the art room, without losing the essence of Art. When integrating more than one subject into a lesson, at times one subject seems to over shadow the latter. Although science is a big component of this art lesson, I do not want it to be the only part students take away at the end of this unit. To reach this main objective, the art teacher should emphasize how the energy is woven into the art and not the other way around. We want to emphasize that we can create art without the use of magnetic or electrical energy, but if we use this kind of energy our art will transform to a different level of thinking and creation.

For this unit to be most successful, this art lesson should be taught while the students are also learning about energy in their science class. Whether the art teacher and science teacher collaborate together or just correlate the timing, the students will be able to make connections between art class and science class, a worthy achievement not only for the students but the teachers as well.

Student Objectives

As students are participating in this unit, they will learn about energy, the Textile Industry of North Carolina, and the Industrial Revolution but also, how all of these connect to one another. To make connections and have an understanding of these topics students will participate in a series of activities and mini lessons that will in return become one big woven masterpiece. By the completion of the unit students should be able to answer the following questions: What is the Industrial Revolution, and why it is important to us? What are textiles, where do they come from, and how are they used? What have been the changes in the production of textiles since technology has taken a lead role in the world? How does energy relate to textiles? Who uses textiles as a part of their art? If the students can answer all or most of these questions and have a successful weave, then they will have met the goals that I had hoped for them to achieve. As a bonus, each class will also have worked collaboratively to create one large woven masterpiece from each individual's small weave.

Art for Teachers

As we begin this unit it is important for students to learn about textiles and the textile industry. The word textile may be new vocabulary for students and it may be helpful to state that a textile is simply a fabric or a woven material. After they have an understanding of the word textile, I will ask students to compile a list of all the different textiles they can think of. This list will be used as evidence for pre-assessing a student's prior knowledge before going in depth with the lesson. When the unit is complete, not only can students reflect on the newfound knowledge by referencing their initial list, but also as a teacher you will have evidence of what they learned.

When discussing the Textile Industry with students it is important to discuss who and what uses textiles have in everyday life, and what types of textiles are used for those every day needs. From creating paper to manufacturing clothing, textiles are present more than people realize. Cotton, raffia, yarn, fabric, felt (wool), ribbon, paper, twine, tape, canvas, these are just some of the many textiles used in the art world. Without these textiles we could not create the things we dream up in our minds. Not just in the world of art but also in every day life, without these textiles we could not live the comfortable life that we choose to live. The comfort of bed covers, toilet paper, and clothing not made from an animal, these are things that students may not think about until the variety of different textiles are described and explained, as well as how they can be used.

"Prior to the Industrial Revolution, textiles were primarily made of wool and were hand spun. But, with the invention of the spinning wheel and the loom, cotton was produced quicker and eventually replaced wool in the textile field." (1) Cotton, being one of the first textiles to really take off in North Carolina, has been one of our primary resources for a variety of uses including clothing and furniture. However, cotton's main use in today's world is for medical purposes.

Did you know that paper, an everyday essential, especially in the art room, was not always made from trees? Woven pieces of plants, animal skin, and cloth were just a few materials that made up paper, in fact not until the middle of the nineteenth century did trees become paper's main ingredient. Papermaking has now become a science, and the production process has become fairly quick. We the consumers can thank the use of electrical mills and vats (A large vessel, such as a tub, cistern, or barrel, used to hold or store liquids) (2) for the modern process of papermaking.

Although machines can generate paper and woven products, artists today still create works by hand, and keep the beauty of handcrafted materials alive. North Carolina in particular, is the home of many wonderful Textile Artists, from sculptural pieces to quilted stories; there are still people today who pride themselves in creating something beautiful, without the use of electrical energy. Some Textile Artists also conserve energy use by creating their art with recycled materials. Such works can be seen in a variety of places especially in Asheville, at the Folks Art Center. Also, to see the machinery used throughout the textile industry one could visit the Textile Heritage Museum outside of Burlington, North Carolina.

Abstract Art is a topic that should be touched on briefly as the students are creating their Abstract Magnet paintings. Although we want the students to make the connection of Magnetic Energy, we also do not want to steer away from the main goal of "weaving the energy" aspect *into* the art lesson. To not lose the essence of art, we have to discuss what Abstract Art is and how it can be identified. Abstract Art is art that does not depict something specific, such as a person, place, or thing; rather it focuses on the use of lines, shapes, and color to achieve its look. Abstract Art is usually imaginative and when I explain it to young students I say, "If you are looking at a piece of art, and have to ask "what is that?" than it is most likely abstract. Also, if you see something completely different in the artwork than the person beside you, then that too will most likely be identified as being a piece of abstract art." Once the students see the difference between a realistic image and an abstract image, they will grasp the concept of abstract and be able to describe it for themselves.

The concept of Abstract Art first began in the early 1900's, and there are many known artists who have made a name for themselves with this type of art. Wassily Kandinsky, Joan Miro, Jackson Polluck, just to name a few, are artists who made Abstract Art what it

is today and gained the respect it deserves. This type of art is significant because it finally gave people/viewers a chance to decide on their own what a work of art was about. It allowed freedom of opinion and allowed for a variety of perspective and interpretation from the observer. Some artists known today for this particular kind of art are Romero Britto and Jonas Gerard.

In the world, having your own voice and opinion is something many people are most proud of but at times it can be difficult to express without others taking offense. Within the art world most are more open to reading one's opinion, by way of an artwork, and then deciphering their own opinion, thus a main reason why the idea of Abstract Art was accepted. Once the students see the difference between a realistic image and an abstract image, they will grasp the concept of abstract and be able to describe it for themselves.

Science for Teachers

As we continue the unit it is also just as important for students to know what energy is, and how we use energy on a daily basis. Similar to listing the different textiles discussed above, we can have each student list all the different ways the world uses energy. This list too, can be used as pre-assessment data.

Although there are two forms of energy, potential and kinetic, in fourth grade science the students will primarily learn about the different forms of energy such as light, sound, heat, electrical, and magnetic. In the art room our point of focus will mostly be on electrical and magnetic energy.

From candles to light bulbs, type writers to computers, electricity and it's generation has come a long way in society, which also means the use of this useful form of energy has rapidly increased as years go by. The energy being produced comes from power plants; the power plants primarily burn fossil fuels to create the electricity which then runs all of our everyday machines, productions, and technological advances. Even the simplest thing, like a pencil sharpener, is powered by electrical energy, whether through an outlet or with a battery.

Energy can also be generated through the use of magnets. Simply put, when a magnet passes through a wire or a magnet is placed near a magnetic metal (such as iron) it has the potential to create useful power, the stronger the magnet the higher the power. Metals get attracted to magnets because the crystals, which make up the metal, all point in one direction when stroked with a magnet (3). Generating power with the use of magnets will also entail needing a place to store the energy, using a capacitor will ensure a longer use of the energy created. Although capacitors vary slightly, they all generally function the same way and allow storage of the magnetic energy.

Social Studies for Teachers

In 2012, North Carolina's energy consumption was almost equally split between four areas, Residential, Commercial, Industrial, and Transportation (4). We would like to think that one sector would out-weigh the other, but in reality we are all doing our share of energy consumption. The majority of the Social Studies for this unit will be based within North Carolina's past, present and future. We will specifically focus on how technology has impacted the industrial sector of this state. A lot of my historical research has been based around the Industrial Revolution and the Textile Industry.

"In 1810, Tench Coxe prepared the first national assessment of manufacturing in the U.S. At that time, North Carolina was producing more textile products by hand, than was Massachusetts with its emerging factory system." (5) Is this still the truth today? Can North Carolina produce more textile products by hand than machine? Thanks to the Industrial Revolution, which began in the 18th century, inventions and machines became less intangible and more possible. From steam engines and steamboats to weaving looms and sewing machines, these advances were just the first of many to create the technological life we know today. As inventions were created, tested, and completed the time it took to mass-produce a product was dramatically reduced.

The Industrial Revolution really set the world up for using less man-powered energy and creating a world that depends on every day use of electrically generated energy. A great example of this is the process of photography. The first photograph took days to capture, then a camera moved to taking a photograph in hours, next minutes, and today we can capture a photograph within seconds. Not to mention, the process of actually developing the photographs being captured, and all the technology available today to edit a photograph, have scaled in the same way.

When the Textile Industry first started to take off it was a great thing, but conflicts started to rise as the demand for textiles rose. From poor working conditions and labor-intensive days to child labor laws being questioned, this industry has come a long way. Another issue in the beginning was the increase in manufacturing cost. However, the more technological advance the world became the less they saw these conflicts arise. The textile industry went from being a handcrafted business to an engineering business fairly quick.

Within the Textile Industry, hand sewing quickly became a thing of the past and electric looms and sewing machines made it easier to create woven products. Speeding up the weaving process meant producing more in less time and thus, generating more products for increased revenue. An example of this is a knitting machine that can create a product (let's say a sweater) in one large piece, rather than knitting the different pieces separately and then knitting each piece together. With the increase of machine-based textiles, comes the reality of an increase of electricity use, and the art of weaving is now partially dependent on using electrical energy for creation.

It would be relative to ask students their opinion: Would we rather hand-weave all of our textiles and save on electrical energy use, or would we rather have a machine do all the work and possibly deplete our energy resources? Some believe that knitting, crocheting, and sewing are becoming a thing of the past because we have machines that can create these products for us. It's almost that these are dying crafts, and we need to continue the tradition or the true craft will be gone forever. For myself, my grandmother taught me most of my knitting and sewing skills, but what happens if families and people stop sharing their craft and the technology takes over for good? Will textiles be as appreciated?

In India, weaving is still known today as a handcrafted treasure. In the United States, weaving has become more of an engineering treasure. Handcrafted textiles were once a necessity in the United States, but now technological advances are becoming a necessity.

Teaching Strategies

As an Art Educator I believe that student's truly have a masterpiece within them once they have learned the processes and techniques of creating a piece of art. One cannot have a final product without first learning process and technique. Once an artist learns a new process or technique, they can synthesize it, use it, and combine it with what they have already learned. It becomes part of them and something they can use for the rest of their life.

Activities (refer to "classroom activities" section for a day by day list of activities):

Students will complete a series of mini lessons and activities that are all surrounded by an overall theme of "energy woven into art." These lessons and activities will allow students to make connections between science, social studies, and art, using real world experiences.

Something that may be beneficial, but not a necessity, would be to teach a short sewing lesson prior to beginning this unit, or when this unit is almost completed. Teaching a sewing lesson can connect to the discussion of how electricity has brought our society to the use of machines for manufacturing textiles, and it will also be helpful when sewing/connecting each student's individual weave into one large woven masterpiece.

As the teacher, I will be demonstrating an activity of my own throughout the whole journey of this unit. Did you know that any given person could create felt from wool, just by walking on it? It is true. Throughout the days of this unit, I will put wool down inside my shoes. The more days I walk with the wool the better the felt will be. With the pressure and heat of my body, I will be participating in a reaction that makes the wool

fibers bond together to create felt. (6) This activity will explain how I can use the same energy for multiple things, and will also connect to different types of fibers.

Examples

The examples for this unit will include: an abstract magnet painting, an energy flipbook, an advertisement, hand made paper, and a weave. It is important to have completed examples of each mini lesson prior to teaching the students. Examples will ensure that students have an understanding of what they are trying to accomplish and give them confidence that they are completing the various steps accurately. Examples are also great to have on hand in case a student is absent and needs a visual aid, to understand the content that they missed, and to also engage the students more when presenting demonstrations.

Demonstrations

Demonstrations are an everyday thing in the art room. Without the demonstrations, students would not learn the process behind the masterpiece, nor the technique that they will use in future art classes and personal artwork. For this unit I will have to do demonstrations on the following: how to create an abstract painting using the energy of magnets, how to form hand-made paper, and how to weave. For some of these demonstrations I will physically show them how to do it, and at other times I will make a video a head of time, and they can watch and learn from that resource as well.

Art Journaling

Students will take notes, complete graphic organizers, and draw sketches of the various activities inside their art journal. An art journal is a resource that each student makes the first week of school, and uses throughout the whole school year. Each art journal has solid paper for writing and drawing, as well as pockets for any handouts and small creations. The great thing about having this resource is that it is student derived; the students are responsible for keeping notes and then referencing it whenever they are trying to recall previous knowledge. At the end of the school year, students take their art journal home, which is an amazing way to review with their parents what they learned and accomplished in art through out the school year.

Technology

In my art room, students have access to ten iPads that we use for a variety of things to enhance the lessons we are working on and to generate 21st century skills. For this particular unit we will use the iPads for researching, creating advertisements, and online classroom assignments through Google Classroom (7). Throughout the years I have discovered the benefits of using technology in the art room, as well as discovered ways

the technology does not always enhance particular lessons. With this unit I believe incorporating technology will give the students an understanding that even as they use the iPad (that is not connected to a power source) they are still consuming electrical energy.

Classroom Activities

(Be sure to reference the vocabulary in the appendix to have more information on the activities and a better understanding of the tools that will be used.)

Day One

First students will compile their lists of textiles and daily energy use inside their Art Journals, and then they will participate in two activities.

Activity 1

Teacher will split class up into two groups- one group will use handheld pencil sharpeners and one group will use electric pencil sharpeners. The goal is to see which group can sharpen the most pencils within 5 minutes, and to compare the energy consumption relative to the number of pencils sharpened.

Activity 2

Each student will create an energy flipbook that represents all the basic forms of energy (light, sound, heat, electrical, and magnetic); their book should include drawings and text.

Day Two

Creating an Abstract Magnet Painting- find odds and ends of magnetic objects (marbles, magnets, bolts, etc...) and drop them into a thick paint (I would use Tempera Paint), then place the painted magnetic objects on a blank piece of paper. Using different strength magnets get the magnetic objects to move across the paper. Students can do multiple objects and colors at the same time or one color and one object at a time. Have the students manipulate the objects until they are satisfied with the look of their abstract painting.

Day Three

Teacher will introduce the Industrial Revolution to students. After learning about the Industrial Revolution students will break into small groups to create an advertisement to represent this time in history. The ad can be created on an iPad or on paper and will need to be visually stimulating.

Day Four

Teacher will begin by showing students a video about how paper is created by machine. Afterwards, students will create paper by hand using dryer lint, paper scraps, plant life, and other materials. As a class, we will create a graphic organizer to compare the two ways of creating paper and discuss the energy use of making paper by hand and by machine. Also, the teacher will introduce various ways that textiles are used in the world and in art.

How to make handmade paper (8)

Step One: Soak scraps of paper and lent for a few hours prior to class.

Step Two: Fill up the blender with water and throw in a handful or two of the scrap papers (not too much, or you'll burn the blender motor). As you blend this will create a Pulp substance.

Step Three: Fill up the plastic tub with Pulp and add more water. The more water, the thinner the paper... the more pulp, the thicker the paper.

Step Four: Use the deckle on top of the mould to "catch" the pulp and gently shake the pulp across the screen, getting it as evenly spread as you can.

Step Five: Take the deckle off the mould and gently "drop" the paper onto the sheet of felt. When the sheet of felt is filled with multiple pieces of paper, lay another sheet of felt on the paper and press it with a sheet of wood. The felt and wood help squeeze out the excess water and dries out the paper.

Day Five

After discussing and learning about weaving and the different textiles, we can use the knowledge to create various weaves. Students will begin to create their own woven work out of a variety of fibers (raffia, yarn, cotton, paper, fabrics...). Before they can begin their woven piece, students will have to purchase their supplies on a given budget. If the student does not budget accurately, they will not have enough supplies to complete their weave. Use the handmade paper and the abstract painting in the weave; one can be used for the loom of the weave and another can be cut into strips to use for the weft and warp threads. Refer to the definitions listed for these vocabulary words in the appendix.

Day Six

Students will complete their weave from the previous day. As they complete their weave, the teacher will help students to attach all the weaves together to create one large woven

work. Before the large work is finished, the teacher will lead the class in a discussion about how life is more productive when we work together.

Day Seven

This is the last and final day of this unit. On this day, students will re-answer the initial questions given to them at the beginning of the unit and participate in a class discussion with the art teacher.

- What is the Industrial Revolution, and why is it important to us?
- What are textiles, where do they come from, and how are they used?
- Have there been changes in textile production, since technology has taken a leading role in the world?
- How does energy relate to textiles?
- Who uses textiles as a part of their art?

Closing Statement

By the end of this unit I hope to have successfully woven energy into art without losing the essence of art. The main purpose of this unit is to have students understand that a variety of subjects relate to one another, and that some things cannot occur without the help of others. Creating individual weaves through a series of mini art lessons and science experiments, and then connecting each student's individual weave into one large masterpiece represents this concept. Within this unit, I emphasize that we can create art without the use of kinetic energy but if we use magnetic or electrical energy within the process our art gets transformed to a different level of thinking and creation. This unit demonstrates integration, collaboration, creativity and risk taking, which will ensure students to learn 21st century skills and college readiness skills. Through this integration of subjects, students will not only become well-rounded students but also build necessary qualities that are demanded in today's workforce. To teach a lesson about process and technique of weaving in the art room can be a good lesson, but to teach an art lesson about the complexity of weaving by way of science and history, is what makes a great art lesson.

Classroom Resources/Materials

The following is a list of recommended resources and materials for this unit:

- Videos and notes: Art Journal (or notebook), Projector, paper & pencil
- Experiment: Electric & hand held sharpener and pencils
- Abstract painting/Experiment: Magnets, magnetic objects (bolts, magnets, marbles...), Tempera Paint, solid colored paper. Also, examples of some famous abstract works would enhance this mini lesson.

- Hand made paper: Dryer Lint, paper scraps, blender (that can be used only for art or science projects, not food), 2 wooden frames 1 with a screen, plastic tub, sheets of felt, sheets of wood.
- Advertisement: iPads and/or Poster Board and choice of medias (paint, marker, colored pencil...)
- Weave: Pretend money, hand made paper, string, and a variety of fibers (raffia, yarn, cotton, paper, fabrics...)
- Teacher activity: real wool (from clothing or elsewhere)

Possible Reading list for Students

- "Experiments with Magnets and Metals" Written by Christine Taylor-Butler
- "Getting to Know the Worlds Greatest Artists" Written by Mike Venezia

 There are actually quite a lot these books that focus on individual artists.
- "Playing with Magnets" Written by Gary Gibson

Bibliography for Teachers

- Crane, Hewitt D., Edwin M. Kinderman, and Ripudaman Malhotra. *A Cubic Mile of Oil*. New York, New York: Oxford University Press, 2010.

 This book discusses the ins and outs of energy: Types of energy, creation of energy, consumption of energy, the past and present of energy.
- "Industrial Revolution." History.com. 2009. Accessed September 20, 2014.

 This is an article about the history of the Industrial Revolution and its impact on the world, particularly in Europe and the United States.
- "North Carolina State Profile and Energy Estimates." E.I.A. US Energy Information Administration Accessed September 26, 2014.
- Striplin, Durwin. "The Global Energy Challenge." Lecture, CTI Seminar from Charlotte Teacher Institute, Charlotte, NC, October 9, 2014.

 A lecture given by seminar leader Durwin Striplin, this lecture and other lectures have been primarily based around the consumption of energy, and the creation of energy.
- Varrasi, John. "Transforming the Textile Industry." ASME.Org. April 1, 2012. Accessed November 23, 2014.

Notes

- (1) Man-Made to Machining- History of the Industrial Revolution: http://www.thomasnet.com/articles/custom-manufacturing-fabricating/history-of-the-industrial-revolution
- (2) Definition of Vat http://www.thefreedictionary.com/VAT
- (3) "Playing with Magnets" written by Gary Gibson
 This is a great student friendly book to reference when discussing magnets.
- (4) Comparing energy useage: http://www.eia.gov/state/?sid=NC#tabs-2
- (5) NC Business History: http://www.historync.org/textiles.htm
- (6) Klein, Jeana "Fibers Class" Lecture, from Appalachian State University Art Department, Boone, North Carolina, June 2010.

This was a class I took in college, it was all about fibers, how to make fibers, what is made from fibers, and the art world of fibers.

- (7) Google Classroom: An awesome website that teachers can sign up and use for free. It's a great website to use with older students (I use it for 2nd-5th grades), that allows you to post assignments and have class discussions. Students sign in and complete assignments by creating a document, taking photographs, or answering discussion questions.
- (8) How to hand make paper: http://paperslurry.com/2014/05/19/how-to-make-handmade-paper-from-recycled-materials/
- (9) Definition of Kinetic http://www.physicsclassroom.com/class/energy/u5l1c.cfm

Appendix 1: Implementing Teaching Standards

This unit includes standards from 4th grade Visual Arts, Social Studies, and Science.

Art:

- 4.V.1.3: Infer meaning from art.
- 4.V.2.3: Create abstract art that expresses ideas.
 - Students will create an abstract painting using magnetic energy
- 4.V.3.3: Create using the processes of drawing, painting, weaving, printing, stitchery, collage, mixed media, sculpture, ceramics, and current technology.
 - Students will create a painting and a woven piece within this unit
- 4.CX.1.4: Explain how place and time influence ideas, issues, and themes found in art.
- With the changes provided by the Industrial Revolution this influenced the Textile Industry and will continue to influence textiles and weaving for years to come.
- 4.CX.2.3: Understand individual roles, while applying collaborative skills in creating art.
- Students will create individual weaves that will be sewn together into one large collaborative masterpiece
- 4.CX.2.4: Explain the effect of technology on the way products look and how they are created.
- Comparing and contrasting hand weaving to machine weaving will justify the effect of technology on the art of textiles.
- 4.CR.1.2: Critique personal art based on teacher-established criteria.
 - Students will self-assess themselves at the beginning, middle, and end of this unit

Science:

- 4.P.1.1: Explain how magnets interact with all things made of iron and with other magnets to produce motion without touching them.
- Creating an abstract painting using magnetic energy will give evidence of how magnets interact
- 4.P.3.1: Recognize the basic forms of energy (light, sound, heat, electrical, and magnetic) as the ability to cause motion or create change.
 - Students will create a flipbook with drawings and descriptions of each form

Social Studies:

- 4.G.1.4: Explain the impact of technology (communication, transportation, and inventions) on North Carolina's citizens, past and present.
- Discussions of the Industrial Revolution and the Textile Industry will give students examples of how technology has impacted society
- 4.E.2.2: Explain how scarcity of personal financial resources affect the choices people make based on their wants and needs.
- When students purchase supplies to create their woven piece they will have to choose between what they need and what they can afford with the budget given.

Appendix 2: Vocabulary

Include all or most of these terms within this unit.

- Kinetic Energy: The energy of motion. An object that has motion (whether it is vertical or horizontal motion) has kinetic energy (9).
- Textile: A type of cloth or woven fabric.
- Abstract: A style of art that is not realistic. Unusual lines, colors, and shapes make the subject look unrealistic. It is often characterized by the use of geometric lines and shapes.
- Loom: A frame for weaving that holds the weft and warp threads.
- Warp: Vertical "threads" that stay in place
- Weft: "Threads" that are woven over and under the warp threads
- Pulp: Blended paper scraps and lent used to hand make paper
- Mould: Frame with a screen, which drains the excess water
- -Deckle: Frame with out a screen, that creates the shape of the paper