Tweet
Pre and Post Visit Curriculum Guide for Teachers

Vik Muniz, *Hummingbird (Pictures of Scrap Metal)*, 2012, digital c-print
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Overview of Pre and Post Guide

This pre and post curriculum guide is designed for teachers to use with their students before and after their school group visit to CMA. The guide draws connections between interdisciplinary themes in our exhibit “Tweet” and classroom learning using contextual information and reflective practice. Through activities that are linked to core subjects, teachers can make their visit an integral part of their classroom.

The curriculum guide supports and challenges students to be active learners by asking them to:

**Discuss:** What ideas can we discuss with a partner, in small groups, and as a whole class?

**Look:** How can we look for details? Find: Where can we find our materials?

**Write:** How will you write a description for your picture? Draw: How can you draw your idea?

**Create:** How can you create your project?

**Explore:** What do you think you will discover when you explore?

**Observe:** What details will you observe?

**Share:** Would somebody like to share something interesting that you observed?

**Choose:** How will you choose to create your project?
About the Exhibit

Tweet

Main Theme
Now commonly used to refer to a “short communication of 140 characters,” prior to 2006 tweet was used to describe the chirp of a bird, generally perceived as a sweet or happy sound.

In New York City, we witness more and more pedestrians striding through life with heads buried in smartphones. We tweet, we text, we email on the go. The simple act of looking around as we go about our daily journey is being lost to an ever more fragmented and hectic contemporary society.

The exhibition Tweet asks us to pause, reflect, and remember a simple act that is available to everyone. Look around you, enjoy nature, and see the birds. All the artworks included in Tweet come from a similar starting point – that of careful observation of nature, specifically of birds. To identify and study at great and near distances, with quiet observation and in fleeting moments – this kind of looking is encouraged by these works. As part of the exhibition, CMA asks viewers to use their technology to come together in shared games around bird spotting, or to simply put the gadgets away and draw from nature. Tweet presents a diverse collection of two and three-dimensional pieces, taking as its starting point ornithological study – works which have set the bar for ornithology (the study of birds) for almost 200 years.
Artists and their Artwork in the Exhibit
Linked to Core Subjects/Themes

Language Arts
Communication and Language

Perch Interactive has an installation echoing the migration of swans across the ceiling, a projected image of flocks of birds wings its way across Gallery visitors direct the migratory pattern, or disrupt the harmony of the birds, scattering or corralling them using bodily movements which, thorough use of outstretched arms, mimics the act of flight.

Parsons The New School for Design will run a course led by Shane Aslan Selzer which investigates CMA as a site for innovative contemporary production centered around children. Students will co produce new works under the title, Tweeting: The Bird Show, an interview series conducted with CMA staff and visitors representing their "bird-selves." Exploring social media platforms such as Instagram and Twitter, Parsons students will also create their own hashtag "bird watching" projects online, adding another participatory layer to the Tweet exhibition.

NYC Audubon Society has partnered with CMA to offer birdcall workshops during the exhibition. Professional ornithologists will teach young visitors how to make different birdcalls, which they will be then able to record in the Sound Booth. A community birdcall event is currently being planned, as is a birdcall competition toward the end of the exhibition.

Gail LeBoff has a video of a small blue bird, feathers fluffed up against a snow blizzard in Vermont while perched on a rail outside her window, adds a sense of timelessness and a reminder of the resilience of these small creatures.

Social Studies
Diversity: Community and Culture

Nina Boesch uses the common NY MetroCard to create mosaic-like portraits of common NY birds, particularly pigeons, using only the colors of yellow, orange, blue, black, and white.

Amy Jean Porter presents colorful portraits in gouache, titled “Birds of North Africa Speak French and English Both at Once”, a series of 355 drawings representing the migratory birds of Europe and North Africa (of which 30 will be shown). Hunt Slonem is well known in New York for his Neo-Expressionist paintings of birds. Often affectionately called “the Bird Man”, he is also renowned as one of the foremost authorities on tropical birds with an aviary of between 30 to 100 live birds at his studio.

Amelie Brown who is a CMA Teaching Artist has created an installation of branches on which young participants will add birds, nests, and eggs created in guided workshops. Visitors will also be invited to test their “bird calling” skills.
Science
Recycling and Waste

Vik Muniz has a large-scale piece “Hummingbird” that anchors the exhibition. On first sight, it appears to use metallic paper cuttings and recycled office scraps to capture this magical bird in flight. Yet, quickly, the viewer undergoes a new realization of scale and material to recognize urban industrial detritus as the material.

Fred Tomaselli uses collage in an entirely different way and clothes his birds in zippered jackets cut from Patagonia catalogues, using the ultra-light, breathable, and brightly colored synthetic fabrics worn by outdoors-enthusiasts to create an alternative plumage.

Kathryn Spence is a San Francisco-based artist is an avid birder and nature lover. Using burlap, mud and other found, dirty and discarded materials, she draws attention to the invasion of the natural environment by human-produced garbage, thereby opening up a dialogue about the relationship of mankind to nature, dirty and clean, self-sufficiency and consumerism.

Emilie Clark has a piece “Everything Drawings” from the series “Sweet Corruptions” which uses watercolor and gouache to create delicate works on paper, which portray nature spreading across the surfaces, transforming and intertwining plant tendrils, birds, animals and insects.

Math
Identifying and Sorting Patterns, Shapes, and Colors

Charley Harper is a renowned ‘bird artist’ whose highly stylized prints map graphic patterns, shapes and color combinations to create whimsical illustrations.

Public parks and bird sanctuaries will partner with CMA on a social media scavenger hunt, titled “Bird Bingo” during the Columbus Day weekend (October 11-13th). Participants will be asked to tweet pictures of well-known birds at a variety of locations, using the hashtag #birdbingo. The first people to tweet from all partner locations will win a prize from CMA.

Tamar Mogendorff has a wedge of swans that migrates across the gallery ceiling.

Sarah Hardesty and her elegant drawings use long isolated lines, which pull, hold, and capture silhouettes of birds in flight.

Eric Rhein has finely drawn humming birds in wire that cast delicate shadows.
Language Arts
Communication and Language

Essential Question:
How can we use different forms of language to communicate?

Vocabulary

Communication: the way we connect to other people and places by exchanging information, thoughts, and feelings through language.

Language: the way we communicate with/tell other people information through using our bodies by speaking, writing, movements, gestures, and facial expressions and through using technology by typing on the computer and texting/talking on the phone.

PRE: The Language of Art: The Bird Singer and the Lion Painter

Recommended Grades: K – 2nd

Activity: Students will visually narrate the story, The Lion and the Little Red Bird by Elisa Kleven by collaboratively painting with different colors of the lion’s tail on a paper mural. The story is about a bird and a lion that speak different languages but use art to communicate. The bird is curious about the lion’s changing colored tail, which he uses as a paintbrush to create murals inside his cave. The class will be divided into small groups of a few students and each group will be assigned a color. As the teacher reads a name of the color in the story, students in that color group will paint different types of lines (straight, curvy, zig-zag, dotted, etc.) on the mural.

Objectives: Through visually narrating The Lion and the Little Red Bird, students will learn that we can communicate with each other through the universal language of art even if we speak different languages. Students will learn that the lion communicates through the visual art of painting using his tail as a paintbrush and that the bird expresses her happiness through the performing art of singing. Students will develop literacy skills by narrating words such as the names of colors through art. Students will learn to work collaboratively and to paint different types of lines that overlap with each other while creating new colors.

Materials/Resources:
Mural: Tempera Paint, Thick Brushes, Large Scroll of Paper, Tape
Book: The Lion and the Little Red Bird by Elisa Kleven

Vocabulary: Visual Art, Preforming Arts, Collaboration, Mural, Colors, Lines (Straight, Curvy, Zig-Zag, Dotted, Etc.)
Opening Statement: This morning when I was on the subway, I heard a group of people singing a cheerful song and saw some other people moving along to the music.

Topic Question: What are different types of language?
Recap: We all discussed that there are many different forms/types of language. We can speak using words, we can use our body movements and gestures, and we can write.

Visualization: Today, we will use art as a form of language by painting a mural of different types of lines. We will be reading the book, “The Lion and the Little Red Bird” by Elisa Kleven. How can we show how the two characters in the story use different types of language to communicate with each other? What are the different colors of the lion’s tail? What are different types of lines?

Recap: We learnt that the bird and lion may not speak the same language, but they can understand each other through the arts.

Transition: How can we show how the lion communicates/speaks to the bird using art?

Closure/Reflection: Can anyone describe how the lion and the bird communicated through art and how it relates to the art we made?
POST: Rockin’ Robin: Moving, Painting, and Singing to Lyrics

Recommended Grades: Pre-K – 2nd

Activity: Students will sing and move their bodies like a bird along to the lyrics of the song Rockin’ Robin by the Jackson 5. Students can also move on a canvas tarp mat and make their own dancing shoes made from bubble wrap and masking tape, which will then be dipped into tempera paint inspired by artist Meghann Snow’s Dance Drawing Series from CMA’s past exhibit “Works in Progress.”

Objectives: Through wearing dancing shoes dipped in paint and listening to Rockin’ Robin, students will learn that they can create visual marks of their movement. Also, students will learn that they can move their bodies like a bird to correspond to the lyrics of the song through various body movements such as flapping their arms like wings, hopping on their feet, and bopping their head. In addition, through singing the lyrics of the song, students will learn that there are different types and names of birds such as robins, chicks, owls, and ravens. Students will learn that that birds live in habitats/homes of nests that are perched on treetops.

Materials/Resources:
Lyrics: Rockin’ Robin by The Jackson 5 (written on the board)
Song: Rockin’ Robin by The Jackson 5
http://www.youtube.com/watch?v=sbk_g0NR-NU
Dancing Shoes: Masking Tape, Bubble Wrap (cut into pieces to wrap around feet), Trays of Tempera Paint, Canvas Tarp Mat
Artist of Inspiration: Meghann Snow’s Dance Drawing Series from CMA’s Past Exhibit Works in Progress http://www.cmany.org/event/worksinprogress/

Vocabulary: Lyrics, Bird Movements (Flapping, Hopping, Bopping), Types of Birds (Robins, Chicks, Owls, Ravens)

Opening Statement: Yesterday, at the school basketball game when our school’s team won, everyone was so excited. I noticed that there were people who were jumping up and down on their feet, clapping with their hands, and loudly cheering with their voices.

Topic Question: How can we use our bodies to communicate/say something? Recap: We discussed many different ways we can use our body to communicate such as using our body movements to show how we feel. We might throw our hands up in the air if we are excited or cross our arms if we are mad. We might sing if we are in a good mood or yell if we are angry.

Visualization: Today, we are going to sing and move our bodies like a bird along to the lyrics of the song Rockin’ Robin by The Jackson 5. We are also going to make our own dancing shoes using bubble wrap and masking tape. We will then dip our dancing shoes into paint and dance on our surface. How can we use our
bodies to move along to the words and sounds of the song? How can we use bubble wrap and masking tape to make our own dancing shoes?

Recap: We learnt that we can move our bodies to the music by listening to the sounds and lyrics/words of the song. For example, we can move our feet in different directions hopping like a bird. We also learnt that we can make our own dancing shoes by wrapping bubble wrap and masking tape around our feet.

Transition: From the Tweet exhibit that we saw at the Children’s Museum of the Arts, how can we begin to move our bodies like birds?

Closure/Reflection: Would somebody like to share your favorite bird movement by showing us? When we look at our painting, how does it show the movements of our body?
PRE: *Tweet: Interpreting Dual Meanings Through Collage Venn Diagrams*

**Recommended Grades:** 3rd – 10th

**Activity:** Students will create collaborative collage venn diagrams in small groups about the dual meaning of the word “tweet” in different contexts using images found in magazines and other print materials. One side of the venn diagram will represent images of nature and the other side will reflect images of technology. The middle will show where these two concepts overlap.

**Objectives:** Through creating a collage venn diagram and interpreting the word *tweet* in different contexts, student will learn to compare and contrast different forms of communication such as a typed message using the online social networking service Twitter and the sound of bird vocalization that is heard outdoors. Also, students will learn about communication in the realm of technology using gadgets such as cell phones, smart-phones, I-pads, computers, and laptops versus communication in realm of nature such as verbal sounds, body movements, and facial expressions. Students will learn to make connections by depicting where nature and technology overlap with each other. When visiting the Museum, students will learn that the dual meaning of the word *tweet* is the main concept/theme of the exhibit.

**Materials/Resources:**
*Venn Diagrams:* Large Sheets of Paper, Pencils, Markers, Magazines, Print Materials
(Newspapers, Print-Outs, Brochures), Scissors, Glue Sticks

**Vocabulary:** Venn Diagram, Dual, Nature, Technology, Social Media

**Motivational Dialogue**

**Opening Statement:** Yesterday, I decided to call my good friend that lives in California on the phone. Even though we live far away from each other, it is great that we are able to stay in touch.

**Topic Question:** What are different forms of communication that you use in your daily life?

**Recap:** We discussed that we can communicate in many different ways such as using verbal language (sounds, speaking, singing), body gestures, texting on cellphones, and typing on online social media sites.

**Visualization:** Today, we are going to compare and contrast different forms of communication. What comes to your mind when you think of the word *tweet*?

**Recap:** We discussed that there are many different meanings of the word tweet such as the chirping sound of a bird and a message/post on the online social networking site Twitter.
**Transition:** How can you use a venn diagram to compare and contrast the dual/double meaning of the word *tweet*? How can you use collage as a medium to show this?

**Closure/Reflection:** What do you find most interesting about the different ways that we communicate? How do you think these forms of communication are beneficial and make our life easier?
POST: Sound Waves: Drawing and Listening to Bird Calls and Songs

Recommended Grades: 3rd – 10th

Activity: Students will create sound wave drawings of the vocalization of birds by listening to different birds call sound recordings on a CD by the Audubon Society which can be heard at Museum’s exhibit in the sound booth or the online recording, All About Birds: Songs and Calls from Cornell Lab of Ornithology.

Objectives: Through carefully listening to the rhythm, pitch, repetition, and tone of a variety of birdcalls, students will learn that they can visually represent different bird sounds through different types of lines (straight, curvy, zig-zag, / short, medium, long). Also, students will learn to distinguish different birdcall sounds that communicate different meanings.

Materials/Resources:
Vocabulary Terms: Classroom Chalk/Marker Board or Chart Paper
Drawings: Paper, Colored Pencils
Recording: All About Birds: Songs and Calls from Cornell Lab of Ornithology
Reading: Why do Birds Sing?

Vocabulary: Sound Waves, Sound (Rhythm, Pitch, Repetition, Tone), Lines (Straight, Curvy, Zig-Zag, / Short, Medium, Long)

Opening Statement: Every morning, we hear the school bell ring, which is a signal that our school day has begun.

Topic Question: How can we use sound to communicate different meanings?
Recap: We discussed that we can make different sounds with different meanings and people speak in different tones and pitches. Some people have a high-pitched voice and some have a deep voice. When people are angry they may have a loud voice when they are yelling or a quiet voice when they are in the library.

Visualization: Today, we are going to listen to different sounds of birds. How can we use drawing to show the different sounds?

Recap: We noticed that different birds create different sounds that have different meanings. We learnt that larger birds such as the raven have a deeper sound than smaller birds like the cedar waxwing. Also, we learnt that birds may sing not only to express that they are happy, but also to communicate with other birds by trying to find or warn another bird, or to claim their territory.

Closure/Reflection: What did you find interesting about the different sounds that birds create to communicate?
Social Studies
Diversity: Community and Culture

Essential Question:
How do people come together as a community in different cultures?

Vocabulary

Diversity: a quality of having many different types of forms, types, and ideas.

Ex: Our school community is diverse in many different ways. We have students from different countries around the world. Also, we have students with different interests including the arts, sports, history, etc.

Community: a group of people that share something in common such as interests, feelings, goals, and characteristics.

Ex: We have a school and neighborhood community. We also have online communities on the Internet such as Facebook and Twitter.

Culture: a way of thinking, behaving, or working in a certain place.

Ex: There are cultures of different countries around the world. The Fourth of July is a holiday that is celebrated in American culture. Also, we have a culture of our school community where students must be respectful of others and aim to do their best.

PRE: Bird Habitat: Sculptural Nests in Nature

Recommended Grades: K – 6th

Activity: Students will create their own public art collaborative nest sculpture outdoors from twigs and branches. Students will be inspired by topics of discussion including habitats and homes both in relationship to themselves and birds and public art in nature.

Students will be inspired by images/and or video of public art such as earthworks created by artists Andy Goldsworthy, Robert Smithson, and Michael Heizer.

Objectives: Through building a collaborative nest, students will learn that similar to birds, work together as a community to build their habitat in nature that has both form and function. Students will also learn that home can be a nurturing space where we can feel safe, comfortable, and loved. Students will learn that artists create public art in their community or in nature that is visible and assessable to the general public or passerby. Also, students will learn that public art outdoors is constantly evolving due to the visitor’s interaction with the work, weather conditions, and durability of materials.
Materials/Resources:
Nest: Branches, Twigs
Artist Examples of Public Art in Nature: Andy Goldsworthy, Robert Smithson, and Michael Heizer
Documentary Film About Earthworks: Andy Goldsworthy’s Rivers and Tides
https://www.youtube.com/watch?v=f7sZv4_OFxg

Vocabulary: Habitat, Home, Nature, Nest, Public Art, Earthworks, Ephemeral, Sculpture (Form and Function), Branches, Twigs

Opening Statement: I like going home after-school. Home is a place where I enjoy relaxing and spending time with my family.

Topic Question: Can you describe why you think your home is a special place?

Recap: We discussed that homes can be a special place for people for different reasons. Home is a special place where we can feel comfortable and safe, spend time with our loved ones such as our family, and enjoy playing with our toys in our room.

Visualization: Today, we will be making a home inspired by the home of a bird. What types of homes do birds live in? What materials can we use to make our sculpture? For inspiration, we will look at photos of public art outdoors in our community and in nature. How can a nest be a public work of art?

Recap: We discussed that we can assemble the branches in many different ways. We can start by creating a circular form with the branches. Then, we can overlap and stack branches on top of each other to build up the walls of the nest.

Transition: Where can we build our nest? How can we start gathering materials?

Closure/Reflection: Can you describe why the sculpture we created is a public artwork? Why do you think it can be a special home for a bird?
PRE: Visual Timeline: Non-Fictional and Fictional Birds

Recommended Grades: 3rd – 10th

Activity: Students will brainstorm names of both non-fictional and fictional birds as a class on a venn diagram. Then, students will break into groups to create visual timelines of the history of either non-fictional or fictional birds through drawing observational/realistic imagery and symbolic iconography of birds.

Objectives: Through brainstorming and visually depicting the history of both fictional and non-fictional birds, students will learn that there are both real birds in nature and imaginary birds in pop-culture and social media. Also, students will learn that both non-fictional species of birds and fictional characters of birds from XXX digital media realm of television, movies, and advertisements, and symbolic representations of birds in different cultures have a history of past, present, and future. In addition, students will learn that they can place non-fictional birds on a timeline ranging from extinct (past) to endangered (future) species. Also, students will learn that they can place fictional characters of birds on a timeline such as ranging from Tweety Bird from the 1940’s to Angry Birds in the present. Students will learn that they can place symbolic and iconographic representations of birds from different cultures such as ranging from the American eagle of freedom to the social media icon of Twitter’s bird.

Materials/Resources:
**Brainstorming:** Classroom Chalk/Marker Board or Chart Paper  
**Timeline:** Paper, Pencils, Colored Pencils  
**Vocabulary:** Fiction, Non-Fiction, Species, Venn Diagram, Compare and Contrast, Visual, Timeline, Pop-Culture, Social Media, Iconography, Symbols, History (Past, Present, Future)

Opening Statement: This XX I was reading the newspaper, I noticed that there were sections of pages with different types of pictures. In the sports section, there were photos of athletes and in the comics section there were drawings of cartoon characters.

Topic Question: What are examples of XX that we see in our community in the real world and non-fictional XX or characters that we may see in pop culture and social media?
Recap: Using a venn diagram, we compared and contrasted a variety of fictional birds found outdoors in nature such as an owl and non-fictional birds in pop culture that may be characters on TV or in books like Angry Birds or symbols in social media such as Twitter’s bird.

Visualization: Today, we will be brainstorming XX visually representing fictional and non-fictional birds. How can we use a venn diagram to compare and contrast fictional and nonfictional birds? How can you use a timeline with pictures and words to show the history of a species of birds or characters of birds?
Recap: We discussed that a timeline can represent the past, present, and future history and that we can create realistic drawings of non-fictional birds and symbolic iconography of fictional birds.

Transition: How will you start creating your timeline? How will you research different birds? Will you hold your paper horizontally or vertically?

Closure/Reflection: Would somebody like to share how you chose to represent a species of birds using a timeline? What does the timeline show about these birds that you think is interesting?
POST: Mapping the Migration of Birds: Moving as a Community

Recommended Grades: 3rd – 10th

Activity: Students will research bird migration and will create a visual map of the migration routes between breeding and wintering grounds. As a source of inspiration, students will look at images of artwork by artists such as Sol Lewitt and Sarah Sze.

Objectives: Through researching and mapping the migration of birds, students will learn that they can create maps as works of art that have lines, patterns, and designs. Also, students will learn that birds can move as a community/flock and will notice that geography influences migration routes.

Materials/Resources:
Map: Paper, Pencils
Artists Examples of Maps as Art:
Sarah Sze: http://www.pbs.org/art21/artists/sarah-sze

Vocabulary: Migration, Breeding and Wintering Grounds Flock, Geography, Mapping, Line, Pattern, Design

Motivational Dialogue
Opening Statement: Yesterday after-school, I saw our school soccer team playing a game where players on each team were cooperating with each other by passing the ball to members on their team. Topic Question: What are different ways that we can work together as a community?

Recap: We all discussed many ways that we can work together as a community by collaborating and teamwork. In our class, we have work on group projects, afterschool some of you play on sports teams, at home some you help your parents make dinner.

Visualization: Today, we will be mapping the migration of birds to show how they move between breeding and wintering grounds. How can we show the migration of birds through mapping?

Transition: How will you start mapping? How will you show different types of birds and their routes?

Recap: We discussed there are different ways that you can map. You can have a color key on your map to show different types of birds. To show the routes of different types of birds, you can draw directional arrows in different colors.
Closure/Reflection: Can somebody share what their map shows about the migration route of birds? How does the geography influence the migration routes of birds?
Science
Recycling and Waste

Essential Question:
How is waste processed and recycled?

Vocabulary

Recycling: a way to re-use a material and change/transform garbage/waste into something that you can use. Recyclable materials can be plastic, paper, electronics, and fabric.

Ex: In our classroom, we recycle paper by re-using it and using the backsides of sheets of paper.

Waste: objects that we get rid of and may get thrown out in garbage cans, collected by garbage trucks, and taken to landfills. Keep in mind the idiom, "One man’s trash is another man’s treasure." Therefore, what somebody thinks is waste/garbage may be special to somebody else.

Ex: In the cafeteria, we throw out our foam trays with the remaining food in the garbage.

PRE: Reduce-Reuse-Recycle-Art

Recommended Grades: K – 10th

Activity: Students create a collaborative collage sculpture of an image of a bird on the ground using recycled materials, which will then be photographed. As a source of inspiration, students will watch the documentary film, Waste Land about the artist Vic Muniz who is represented in the exhibit Tweet with his large photographic print Hummingbird. Students will compare the system of processing waste in Brazil as seen in the film to the system in the US.

Objectives: Through creating a collage sculpture of a bird, students will learn that they can transform pieces of recycled materials into an artwork by sorting, selecting, and arranging them. Students will make connections to the documentary film, Wasteland by linking the process of making their artwork to that of artist Vic Muniz collaborating with the catadores (garbage pickers) in Brazil. Through photographing the image, students will learn that the photograph of the sculpture not only serves as documentation of the work, but can be the artwork. Also, students will learn about documentary film as art. Through watching Waste Land and learning about the artist Vic Muniz’s travels to the world’s largest landfill in Brazil, students will learn that waste can be transformed to create works of art. Students will learn about different systems of processing waste such as how catadores manually sort through piles of garbage in a landfill.
Materials/Resources:
Collage: Recycled Materials, Chalk, Latex Gloves, Camera
Documentary Film: Waste Land http://www.wastelandmovie.com/
Vocabulary: Landfill, Documentary Film, Collaboration, Catadores (Portuguese word for garbage pickers in Brazil), Transformation, Collage, Sculpture

Opening Statement: This morning before I came to school, I collected the garbage bags from my bathroom and kitchen and threw them down the garbage shoot in my apartment building.

Topic Question: Where do you throw out your garbage and what do you think happens to it?

Recap: We discussed that there are many places where we throw out our garbage such as public and private trashcans and recycling bins. We may put trash bags on the street to be collected by garbage trucks that take the garbage to landfills or maybe it gets recycled and reused.

Visualization: Today, we will be creating a collage sculpture of a bird using recycled materials by looking at another system of processing waste by watching the documentary film Wasteland about the artist Vic Muniz. (After watching documentary) How can we as a class create our own collage sculpture bird inspired by the film?

Recap: We discussed that we can collect recycled materials from inside our school in recycling bins and outside in our schoolyard. As a guideline for us to create an image of a bird, we can draw a chalk outline of a large bird on the floor outdoors and fill it in with the recycled materials that we find.

Closure/Reflection: How is the way we created our collage sculpture similar or different to the artist, Vic Muniz’s process seen in the documentary film? What was your favorite or most challenging part about creating the collage?
POST: Compost Stew: Turning Trash into A Treat

Recommended Grades: PK – 4th

Activity: Students will create drawings of their compost stew inspired by reading The Little Composter by Jan Gerardi (Pre-K) or Composting: Nature’s Recyclers (K–4th) by Robin Koontz. As the teacher reads, he/she will write down words on the board that correspond with the process of composting. Students will refer to these words when creating their own drawings that will be used to inspire their own compost stew in the school’s garden. Students can use the book Compost Stew: An A-Z Recipe for the Earth by Mary McKenna as an ingredient book.

Objectives: Through creating drawings of compost ingredients, students will learn that this can serve as a recipe to make their own compost stew outdoors. Through reading about composting, students will learn that the process of composting is a form of recycling and that compost consists of waste such as dead leaves, food scraps, and grass clippings. Also, students will learn that decomposers such as small animals, fungi, and bacteria can transform garbage into a tasty compost treat/fertilizer for plants in nature to grow.

Materials/Resources:
- Drawings: Paper, Pencils, Crayons or Cray-paws
- Compost: dead leaves, food scraps, grass clippings, etc.
- Book (Pre-K): The Little Composter by Jan Gerardi
- Book (K–4th): Composting: Nature’s Recyclers by Robin Koontz
- Recipe Book: Compost Stew: An A-Z Recipe for the Earth by Mary McKenna

Vocabulary: Compost, Fertilizer, Stew, Decomposers, Bacteria

Opening Statement: Yesterday after-school, I went grocery shopping to get ingredients for my dinner to make vegetable pie. When I got home, I pulled out my recipe book to help me make vegetable pie.

Topic Question: How can we use a recipe to make a tasty treat?

Recap: We discussed that a recipe is a list/set of instructions to make a dish. Some of us have recipe books at home in our kitchens that our parents might use to make a certain dish.

Visualization: Today, we will be creating drawings of our own recipe for compost stew which we will then use as inspiration for actual ingredients that we will use to make our own compost stew outdoors. What do you think compost is? What ingredients will you draw in your compost stew pot/bowl?

Recap: We discussed that there are a variety of different ingredients that we can both draw and place in our compost stew such as dead leaves, food scraps, and grass clippings.
**Transition:** How will you begin your drawing? Will you draw a large bowl or pot to place the ingredients inside? How can we use our drawings as a recipe for our compost stew outdoors?

**Closure/Reflection:** Would somebody like to share why you think the compost we made would be a tasty treat for nature?
Math
Identifying and Sorting Patterns, Shapes, and Colors

Essential Question:
How can you identify different forms by observing patterns, shapes, and colors?

Vocabulary

Identification: the process of recognizing, observing, and naming something.

Ex: When we go bird watching, we can identify different types of birds by observing their characteristics such as their shape, size, and color.

Sorting: placing/arranging objects, materials, animals, and people into groups and separating them into different types.

Ex: We sorted the drawings of the birds into different piles/groups of colors. The pictures of blue birds are in the first pile and the pictures of the red birds are in the second pile.

Patterns: when a picture, symbol, or color is repeated to create a design.

Ex: The bird has a pattern of blue and white stripes on its wings. There is a line of black feathers and then a line of white feathers and the colors take turns/alternate to create a pattern.

Shapes: the outline of a person or object. Shapes are closed lines. Shapes can have lines/edges that are straight, curvy, zig-zag, etc. Shapes can be different sizes such as small, medium, and large.

Ex: The bird’s body is a small circular shape and its two wings look like rounded triangles. Colors: We are surrounded by different types of colors. We can see colors that are light/dark and bright/dull.

Ex: Primary colors are yellow, red, and blue because they are colors that can’t be made from scratch. But, you can use the primary colors, to mix secondary colors. For example, when you mix blue and yellow together it makes green, which is a secondary color.

PRE: Bird Watching Bingo: Feathers, Beaks, and Wings

Recommended Grades: K – 10th

Activity: Students will go bird watching outdoors and create observational drawings of birds on their bird bingo templates (paper divided into 9 squares with short descriptions of different characteristics such color of feathers, size/shape of beaks, etc.). When students find a bird associated with the characteristics, they will draw it. The challenge is to find birds associated with, all the characteristics
listed and fill in three birds in a row (horizontally, vertically, or diagonally) on the bird bingo template. Students in 2nd – 10th grades can also use a bird field guide book so when they find a bird associated with the characteristics they not only draw it, but also get to identify which type of bird it may be by writing the name underneath the image of the bird.

**Objectives:** Through carefully observing birds and drawing them, students will learn to notice, and depict the details of different bird characteristics such as the colors of feathers and the size of beaks, and the shape of wings. Through using a bird field guide as a resource, students will learn that they can identify different types of birds. Also, students will learn that birds can have, beaks and feathers of different colors and sizes.

**Materials/Resources:**
Bird Bingo Template: (paper divided into 9 squares with short descriptions of different characteristics such as color of feathers, size/shape of beaks, etc.), Colored, Pencils

**Vocabulary:** Bingo, Characteristics, Bird Watching, Field Guide

**Opening Statement:** When, I am looking around the classroom, I notice that each one of you has different hair. You all have hair of different lengths including short, medium, and long; different colors including blonde, brown, and black; and different textures including straight, curly, and wavy.

**Topic Question:** How do we look different from each other?

**Recap:** We observed that there are many characteristics that make us look different from each other such as our clothing, facial features, skin color, etc.

**Visualization:** Today, we will be playing a game bird bingo by drawing pictures of birds. We will be going bird watching outdoors and will be using a bird bingo template and bird field guide as a resource to identify different birds. What are similar or different characteristics of bird? How can you use the bird bingo template?

**Recap:** We learnt that birds can be different from each other because they can have beaks and feathers of different colors and sizes.

**Transition:** How will you start? What types of characteristics will you look for? How will you draw these characteristics? How will you use your bird field guide?

**Closure/Reflection:** Would somebody like to describe anything interesting about the birds they observed?
**POST: Bird Feeder Sculpture: Form and Function**

**Recommended Grades:** Pre-K – 2nd

**Activity:** Students will create a bird feeder sculpture using recycled materials that will hang outdoors preferably visible from the classroom window. Students will carefully observe the birds and will record the types and characteristics of birds. There will be a class chart of feeding times where each student in the class will be assigned a different day and time to refill the bird feeder with bird food. Also, there will be individual observation templates where students will record the date/time of their observation, a drawing/s of any birds that they see, and a written description of the bird’s characteristics.

**Objectives:** Through creating a bird feeder, students will learn that the form of sculpture can be functional. Through creating a collaborative sculpture and having a class chart of responsibilities, students will learn to work together as a team and to have individual responsibility. Also, through graphing and charting feeding times, students will learn that there are feeding patterns. Through drawing birds, students will learn to depict and observe the colors, shapes, and sizes of birds. Also, students will be able to describe these characteristics through words.

**Materials/Resources:**
- Bird Observation Template: (paper with area small box at the top for the date and time, a large square box in the center for an image, and lines underneath for writing)
- Drawing: Pencils, Colored Pencils // Chart: Large Paper, Markers
- **Vocabulary:** Sculpture (Form and Function), Record, Observation, Responsibility, Characteristics, Graph, Chart

**Opening Statement:** This morning at breakfast, when I was pouring milk into cereal bowl, the cereal and milk overflowed and spilled onto the table. I realized that the bowl was too small and shallow so I decided to use a larger and deeper bowl.

**Topic Question:** How can the way an object is made/designed impact the way it works?

**Recap:** We discussed different types of objects with different forms (the way it looks) and functions (the way it is used). For example, a bowl is deep to eat cereal out of and a plate is 2D and flat, which is functional to use to eat food like pancakes.

**Visualization:** Today, we are going to be making our own bird feeder sculpture using recycle materials, which will hang outside our classroom window. We will have a class chart of feeding times where each one of you will have responsibilities to refill the feeder. Also, we will be using our observation template/paper to record the dates and times of our observation. What types of recycled materials can we use? How can it have both form and function?
Recap: We discussed that bird feeders can be made out of 3D recycled objects such as a big plastic milk jug where we can carve out an opening large enough for a small bird to fit inside. Also, the jug is deep enough to hold the bird food.

Transition: Where can we find a recycled milk jug? How can we fill the bird feeder with bird food? When observing the birds, what will we record and draw?

Closure/Reflection: Would somebody like to share any interesting observations?
POST: Visually Calculating Bird Migration: Flight Distances and Patterns

Recommended Grades: 3rd – 10th

Activity: Students will visually calculate the difference between the migration distances in miles of different species of birds by using string to measure different distances.

Objectives: Through visually calculating migration distances of birds, students will learn that different species of birds fly different distances. Also, students will learn that birds have different breeding ranges at different times of the year. Also, students will learn the flight pattern of a flock of birds migrating resembles a v-formation shape. Materials/Resources: Measuring: String, Scissors, Metric Yard Sticks, Paper, Pencils


Vocabulary: Migration, Distance, Unit of Measure, Compare and Contrast

Motivational Dialogue

Opening Statement: For summer vacation, I took a long airplane ride to fly to Australia, which is at the far right hand side of our map. When I arrived in Australia, I was relieved that it was a short drive in the taxi to the hotel.

Topic Question: What are different distances you travel using different modes of transportation?

Recap: We discussed that we can travel different distances that are both short and long by walking, driving, biking and flying.

Visualization: Today, we are going to calculate the distance that birds move, which is called migration, by using string. How can we use string as a tool to measure distance?

Recap: We discussed that we can use string to measure distances by placing the string along our ruler.

Transition: How will you start? How will you calculate the difference of the distances using the strings?

Closure/Reflection: Would somebody like to share an interesting observation about the strings and what it tells us about the birds?
Additional Resources

Interdisciplinary Approaches to Learning About Birds
This Class is for the Birds by Dave Magpiong (middle – high school)
http://www.fledgingbirders.org/files/ThisClassisfortheBirds.pdf

Sizes, Shapes, and Colors of Birds
Birds by Kevin Henkes (4 – 8 years)
http://www.amazon.com/gp/product/0061363049/ref=as_li_tf_il?ie=UTF8&camp=1789&creative=9325&creativeASIN=0061363049&linkCode=as2&tag=scanspeet her-20

About Different Types of Birds
Fine Feathered Friends: All About Birds (Cat in the Hat's Learning Library) by Tish Rabe (4 – 8 years)