



EXPLORING MUSIC WITH THE PIPE ORGAN

OLIVIER MESSIAEN COMES TO VISIT

COLOR, RHYTHM & FORM

AN INTEGRATED TEACHING UNIT FOR SCHOOLS

an educational project of
The Friends of the Kotschmar Organ
Portland, Maine • foko.org



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FRIENDS OF THE KOTZSCHMAR ORGAN

Education Committee

Elsa Geskus, Chair
Albert Melton • Bob Packard
Nate Randall • Judy Stallworth
John Sullivan • David Wallace
Nancy Wines-DeWan
Ray Cornils • Kathy Grammer

Curriculum Task Force

Ray Cornils, *Municipal Organist of Portland*
Kathleen Grammer, *Executive Director*
Elsa Geskus, *Education Coordinator*
Nate Randall, *Volunteer (graphic design)*

EDUCATOR CONTRIBUTIONS

Breakwater School, Portland, Maine

Peter Bridgford, *Creative Writing Essentialist*
Mari Dieumegard, *Early Childhood Art Essentialist*
Cheryl Hart, Director of Elementary & Middle School Programs
Alex Johnston, *Outdoor Adventure & World Language Essentialist*
Martin Lodish, *Financial Director*
Kelly McConnell, *Art Essentialist*

Mt. Ararat Middle School, Topsham, Maine

Barbara Larsen

Cape Elizabeth Middle School, Cape Elizabeth, Maine

Janna DeWan, *Art Teacher*

PHOTOGRAPHS & ILLUSTRATIONS

Russell I. Burleigh
Elsa Geskus
Michael Hetzel
Barbara Larsen
David Kirstein
Nathan A. Randall

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Elsa Geskus

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EXPLORING MUSIC WITH THE PIPE ORGAN

OLIVIER MESSIAEN

COMES TO VISIT

The FRIENDS OF THE KOTZSCHMAR ORGAN (FOKO) is pleased to present this curriculum based on the life and music of Olivier Messiaen. It is the product of ten years of active in-classroom teaching.

FOKO's Education Committee chose the music of Olivier Messiaen (1908-1992) because Messiaen:

- is a major 20th-Century composer and organist;
- was a person of great individuality and imagination;
- loved rhythm, including Greek, Indian, and Balinese rhythms;
- used tone color innovatively in his music;
- found inspiration in multi-colored stained glass;
- was influenced by the Impressionist music of Claude Debussy;
- was greatly influenced by poetry;
- loved birdsong and used it extensively in his music;
- was experienced in “environmental listening” as he catalogued hundreds of birds and their songs;
- was a person of complex philosophical thinking;
- created his own scales (modes of limited transposition) as a vehicle to express “color” - which leads into explorations of major, minor, whole-tone, pentatonic, blues and “Messiaen” scales;
- wrote complex and seemingly chaotic music whose underlying structure can be discovered;
- was a prisoner of war in World War II (and composed the *Quartet for the End of Time* while imprisoned);
- composed for a very wide diversity of instruments;
- used the vast array of organ stops and sounds to heighten the sense of color which he sought in his music;
- is a distinct contrast to J. S. Bach (featured in another FOKO curriculum).

Central to the curriculum are the two Artist-in-Residence visits presented by an organist, demonstrating with a pipe organ. We also have included several pre-visit activities to prepare students by exploring color through the visual arts. Additional enrichment activities build on the experience of the visits.

We include teacher resources with YouTube links, assessments, and reproduction masters.

The “Kotzsch-O-Rama: Integrated Arts and Science Day” is a whole-day, hands-on experience for students. There are stations that explore many facets of music, writing, movement, art, and science.

While the unit was created for the Kotzschmar Organ in Portland, Maine and Kotzschmar Junior (our portable, demonstration organ), it can be replicated by using a local organ in a hall or church or even through the use of YouTube videos. You may wish to check with the American Guild of Organists to locate an organist or the Association of Pipe Organ Builders in America for an organ builder to assist with pipes within your local area.

The Education Committee of the Friends of the Kotzschmar Organ, in Portland, Maine hopes you will find these materials valuable in engaging your students in a music and arts exploration in your classroom. Please visit the FOKO website at www.foko.org for more information about our education programs. If you have questions, comments, or concerns about these materials, please contact us at info@foko.org.

TO THE ARTIST-IN-RESIDENCE ...

This curriculum is the product of 10 years of bringing the pipe organ to school classrooms. I have found it to be an engaging and stimulating experience as I plant seeds of knowledge and understanding.

The more collaboration I have done with the classroom teacher before coming in to teach their students, the stronger the results. Your presence in the classroom can invigorate a class and enrich the teaching experience. With the many time sensitive challenges that teachers face, your presence in the classroom can also be a bit of a disruption. Establishing a working relationship with the teachers and functioning as a team with a collaborative mind-set is crucial.

When using the pipe organ as an vehicle to teach sound wave energy in the science classroom, I find out what other science concepts the classes have studied and what terminology they have employed (for example: mechanical energy, laws of conservation of energy, hypothesis, data, etc.). My use of that vocabulary will reinforce the teaching that has already occurred.

I will often start my presentations to a class by asking student what they know. This allows me to discern where the class is at that time and gives me a basis on which my teaching will build.

It's OK to dress up a bit for these presentations. You are an artist-in-residence, a special visitor to the classroom. Wearing a multi-colored scarf when I speak of Messiaen, or a white wig as Bach comes to visit may be a bit "corny", but it is a vehicle to a child's memory bank. They respond positively to the encounter.

Visual presentations can be a great asset to your teaching. Over the years I have come across many fine YouTube videos that have become effective teaching tools. The curriculum shares several links that I have found useful.

When presenting a concert following classroom instruction, I find it compelling to actively engage students in the playing. Have a child explore the

highest octaves of a 2' rank, or experience the rumble of a 16' or 32' rank as they play the pedals. Have them play the low pedal *D* of the Bach D-Minor Toccata (BWV 565) at the appropriate time, while I play the manual parts. A general principle is: "Do not do for students what they can do for themselves."

If you have questions, reactions, or responses to this curriculum, please do not hesitate to be in touch with us. As we know, the pipe organ is a marvelous instrument. It opens the doors to so many wonders of our world.

Ray Cornils
Artist-in-Residence
Portland Municipal Organist

Ray Cornils at the Kotschmar console



OLIVIER MESSIAEN COMES TO VISIT

AN INTEGRATED TEACHING UNIT EXPLORING COLOR, RHYTHM, AND FORM

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ARTIST-IN-RESIDENCE VISIT, DAY ONE

THE PIPE ORGAN, MESSIAEN'S MUSIC, AND COLOR



“So ... What do you see?”

OBJECTIVES

- ▶ Students will become familiar with the life and music of Olivier Messiaen in France during the 20th century.
- ▶ Students will listen imaginatively and creatively.
- ▶ Students will ponder the questions of sound color through various experiences.

SYNOPSIS

Present biographical information about a major composer of the 20th century.

Explore a unique and individual creative spirit.

Listen to and clearly converse about reactions to music of the Impressionist and 20th-Century periods of Classical music.

Introduce the concept of musical scales and their associated “colors.”

Explore the relationships of:

- color and sound
- poetry and music
- visual and aural

Listen to sounds around you, perhaps outside in nature.

MATERIALS NEEDED

- ◆ Stained glass window (as shown on the cover) or an abstract painting.
- ◆ CDs of music of Debussy and Messiaen
- ◆ Digital projector and computer with internet connectivity to show YouTube videos.
- ◆ Laser pointer
- ◆ Charts of scales (major, minor, whole-tone, Messiaen mode of limited transposition, blues)
- ◆ Excerpts from Messiaen's organ works
 - Pentecost Mass
 - L'Ascension (Transports de Joie)*
 - Les Corps Glorieux (Joie et Clarte)*
- ◆ Large copy of Diagram of *Outbursts of Joy*
- ◆ Pipe Organ (*The following narrative assumes the availability of a pipe organ — either a portative in the classroom, or a large instrument in a church or hall. If none is available, excerpts from CDs or YouTube videos may be substituted.*)

CLASS PRESENTATION

Before students enter, place stained glass at the window. As students enter, play music of your choice on the organ.

Introducing

Olivier Messiaen and the Pipe Organ

Introduce yourself:

Profession: musician

Study: started playing piano, organ, etc. at what age

Explore what the students already know about a pipe organ.

Listen to their replies. Take the information that they give you and use it to expand their knowledge.

If they say “not much,” reply: “Then this is your lucky day – there is much that you will learn!”

How long has it been around? (over 2500 years)

What country? (Greece. We know this from paintings and other writings.)

Oldest playable pipe organ built around 1430 is in Sion, Switzerland



<https://www.youtube.com/watch?v=R6ble31amDA&list=RDR6ble31amDA>

It takes air for it to sound.

When you pull the stops you get different sounds.

The organist plays with hands and with feet.

The keyboard that is played by the hands is called a *manual*. The keyboard played by the feet is the *pedal board*.

Question: Are all the pipes the same?

What will the different lengths, various shapes and materials do to the sound?

Different sounds are made by different pipes. A short pipe makes a higher sounds, a longer piper makes a lower sound.

Invite a student forward to choose a stop on the organ. Play a short piece of music on that stop.

Then ask the student to choose a different stop or combination of stops and play the same piece.

What changes did they observe?

Then play it again using different stops. Pull another stop, now reeds.

“*Timbre*” is the French word used to describe tone color. Note how a piano has a different timbre from a xylophone, or a violin.

We will talk about tone color and sound as we explore the music of Messiaen.

Claude Debussy: *Clair de lune*

Play the following video (or equivalent):



<http://www.youtube.com/watch?v=Xiq3gHL83f8>

What feelings does this music generate in your mind as you listen to it? What do you think the composer wanted you to feel?

Some artists like Claude Monet created paintings that really don't show the exact scene but give you an impression of what the artist wanted you to see.

This piece is called *Claire de lune*. Do you know the French word “*lune*”? Not a bird... think of lunar... what does that mean?

Yes, moon. (Lunar eclipse, lunar landing, etc)

So *Clair de lune* is a song to the moon: it literally means “moonlight.”

When do you see the moon? Yes, lullaby makes sense. Very soft, smooth, gentle music.

Look at the paintings in the video while listening to the music. Notice how they are not crystal clear; the painting gives you a hint of what is being represented. It gives an impression.

Look at the colors in the trees and flowers and see how “light” is used by the artist. You see boats but not very clearly.

What do you think the composer is trying to make you feel?

It is very calming. It is all about an impression of the artist and the composer.

At the end of the 19th century in Paris, France there were a movement that gave artists license to create “impressions” of what they wanted to represent. It was called the “Impressionist Movement.”

Debussy: *Arabesque No. 1*

I love the music of Claude Debussy

Listen to Debussy’s *Arabesque No. 1*



<http://www.youtube.com/watch?v=iv1jLyD4Pv8&feature=fvwr>

What do you hear?

Is it energetic?

Does it calm you or excite you?

This piece is named *Arabesque*.

It swirls like a ballet move, very smooth.

Look how it goes up here.

Look at the different colors.

What do you think they represent?

Stained Glass Window (or Abstract Painting)

Let’s look at the stained glass window that I brought in today and see what impressions we might see.

(Students come up to the window and point out what they see: everything from a bird, rainbow, carnival, pair of lips, half of a head of a puffin).

What happens if we turn the window 90 degrees?

(Students discuss other impressions)

Isn’t it amazing of what we see in art? Our imaginations create new experiences.

Do you like this art? Why? Or why not?

I like it because every time I look at it I see something different.

Claude Debussy was a great influence on someone who will visit during our next session.

His name was Olivier Messiaen.

They both lived in the same country: France.

Messiaen was a very creative person and you can ask about him at our next meeting.

He wrote a very unique piece of music that we will now listen to.

Messiaen and his Music

Listen to *Outbursts of Joy* without telling the name of the piece.



<http://www.youtube.com/watch?v=d03Kmh3bEe8&feature=related>

What do you think about the music?

Chaotic, scary, energetic.

What would you name this piece? Messiaen named it *Outbursts of Joy*!

Student reply: “It doesn’t sound very joyful!”

Ray’s reply: “Well, is it an outburst? It is about creative energy.”

Did you notice any themes, melodies, ideas that came in or were repeated?

Well, believe it or not, there are several themes or ideas that Messiaen presents.

Distribute the *Outbursts of Joy* diagram, one per two students. This diagram is a representation of the impression that a music teacher noticed and thought of when she listened to this piece of music.

Listen again. Does this piece have form? Does anything in the music repeat?

Do you see anything on this diagram that appears several times?

(Ricochet, fireworks, different colors, ta-da)

Explain the various symbols on the chart

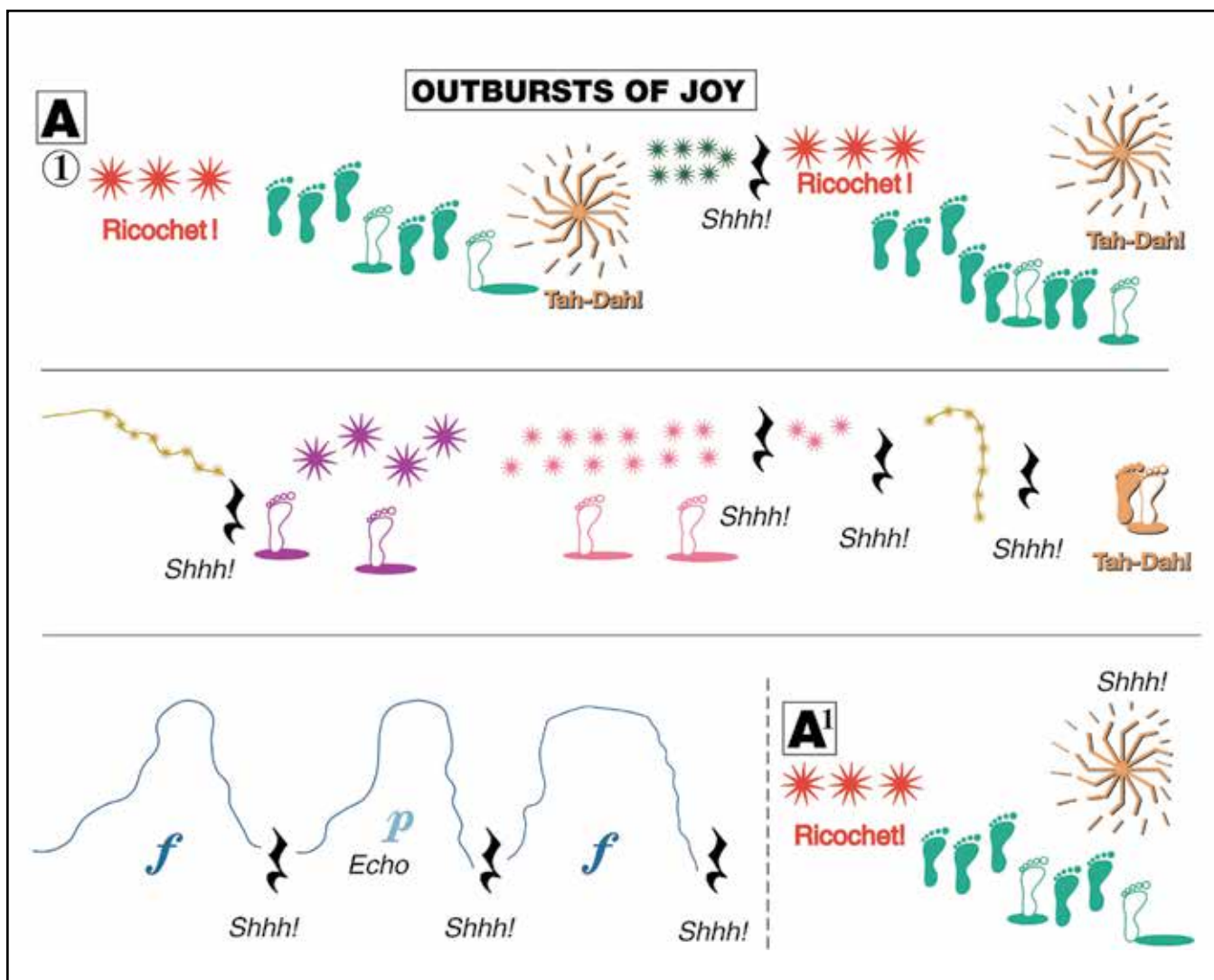
Ricochet = rhythm.

Feet = pedal notes

Shhh = rests

f = loud *p* = soft

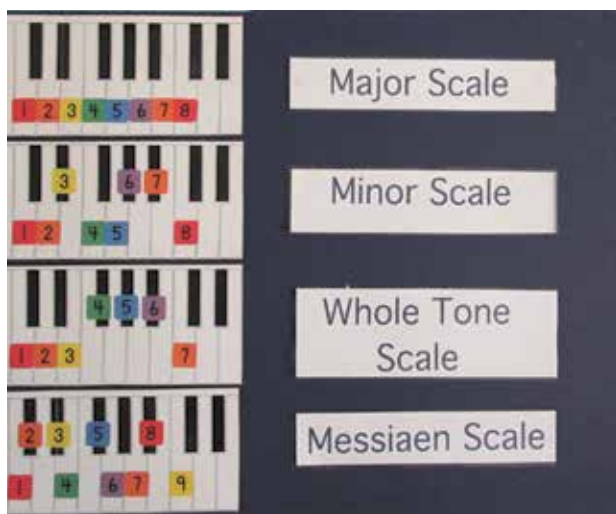
Listen to *Outbursts of Joy* using a laser pointer to follow on the large chart.



Explore student reactions to the piece.

Discuss consonance vs. dissonance.





About Scales

Discuss scales (a scale is a summary of notes used in a piece)

Bach used major and minor scales - play them

Debussy used whole tone scales - play them

Messiaen invented his own scales

Major, minor, whole tone, Messiaen, American blues

Play *Twinkle, Twinkle, Little Star* in each of these scales



FOKO's custom-built portable demonstration organ, affectionately known as "Kotzsch, Jr." shown with its designer and builder, David Wallace.

Twinkle, Twinkle in various scales

Major Scale



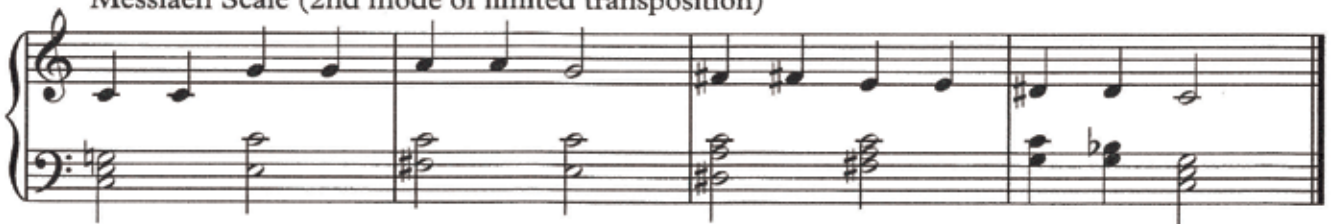
Minor Scale



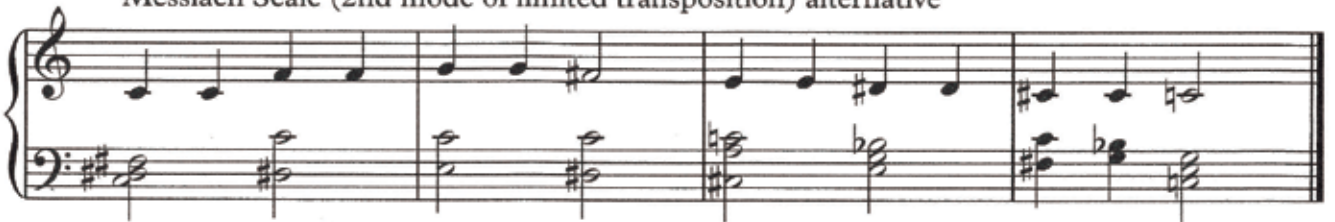
Whole Tone Scale



Messiaen Scale (2nd mode of limited transposition)



Messiaen Scale (2nd mode of limited transposition) alternative



Blues Scale



OLIVIER MESSIAEN COMES TO VISIT

ARTIST-IN-RESIDENCE PRESENTATION: DAY TWO



Ray Cornils as Olivier Messiaen

LEARNING OBJECTIVES

- ▶ Students will become familiar with Messiaen's use of bird songs in his compositions.
- ▶ Students will listen and explore how music creates images and emotions.

SYNOPSIS

- ◆ Explore the relationship of color and sound
- ◆ Explore the relationship of bird songs to compositions
- ◆ Explore how organ pipes produce various sounds

MATERIALS

- Colored scarf, beret, open shirt and jacket
- Chart of scales
- Video clips

REVIEW FROM DAY ONE

Music is a means to express your thoughts and feelings

How do you express: joy, grace, love, awe, despair, the infinite?

What kind of music would you create if you were a

prisoner of war?

It is OK to create your own thoughts, even though they are different than those of another person.

Messiaen created his own musical language, one that used new scales, and one that was richly colored and dazzled the listener.

This is a good time to explore major and minor scales, explore the whole-tone scale that Debussy used, then play Twinkle, Twinkle, Little Star in the various scales.

The organ was a great instrument for Messiaen to express his thoughts. He loved its power, its many colors, and its ability to sustain sound for a very long time.

Messiaen's Love of Birds

Messiaen loved nature, especially the songs of birds.

They are one of the most natural of musicians, freely singing their songs. Messiaen went into the quiet of the countryside to clearly hear and learn the sounds of the birds and nature.

How well do we really listen to our surroundings?

VISIT DAY TWO

(Note: Biographical information is inserted for Artist-in-residence's help. Draw upon parts of this only as needed.)

Enter the classroom in costume. Ask what students notice about you ...

Why do you think I'm wearing a beret? (artist?)
I was in the French army.

Note that I am wearing a multi-colored scarf. Notice how the colors are made by combination of threads (orange by red and yellow, purple by red and blue).

I love colors and visualize my music in colors.

Painters lived in France who loved colors.

Monet, Renoir and Cézanne created a type of art called Impressionistic.

As a child, I loved the music of Claude Debussy.
Let's listen to a piece of his: *Claire de lune*.



<http://www.youtube.com/watch?v=Xiq3gHL83f8>

Talk about Messiaen's life

I was born December 10, 1908 in Avignon, France.

How many years ago was that?
I did not have any brothers or sisters.
My parents were not musicians.
They home schooled me.

My father loved literature and copied all of
Shakespeare's writings into French.

My mother and grandmother read me French poetry
and fairytales.

They loved poetry.
Do you know any poetry?
Ask them to recite it

Have them read a poem (Henry Wadsworth
Longfellow: *Paul Revere's Ride* or another of your
choice)

Listen, my children, and you shall hear
Of the midnight ride of Paul Revere,
On the eighteenth of April, in Seventy-five;
Hardly a man is now alive
Who remembers that famous day and year.

Note that poetry has rhythm. What do you think
about when I say rhythm?

It has a beat; words have hard and soft syllables.
It has energy.

Poetry and music are intertwined.

I would later stage operas.
What is an opera?
There is action, a story, and music.

I even composed an opera about one of my favorite
people: St. Francis of Assisi who loved nature and
animals.

I love being outside in nature.

Close your eyes for about a minute and just listen.
What did you hear?

Students give responses:
heard the fan of the projector,

chewing gum crunch,
heard breathing,
heard the building breath, etc.

What did I mean by hearing the building breathe. I
heard the low hum of the ventilation system.

If you were to go outside, what might you hear?

Birds, wind, drops of rain hitting the side of the
building, trees reacting to the breeze, car tires moving
the molecules of the water from the road)

Messiaen Videos

Let's listen to what Messiaen listened to.

Note that he will be speaking French. You can read
the translation on the screen.

We will need to listen carefully.

Messiaen in the woods notating birdsongs.



[http://www.youtube.com/watch?v=xkKrD9knBvU&
feature=related](http://www.youtube.com/watch?v=xkKrD9knBvU&feature=related)

Listen and try to figure out what he is gathering about
the images and sound of the birdsong.

How did he describe the bird? (Student responses –
remarkable, authoritarian)

What did he carry in his hand? (Music paper for
writing down the notes.)

The bird is using the same note or repeating it, is it
high or low, rhythm, and pitch. You need to listen
many times to capture the song.

Talk about Messiaen's love of birdsong

Now I will play a second video. This time Messiaen's
second wife, Yvonne Loriot, will be playing the piano.
Notice Messiaen transfers the birdsong into music for
the piano.

You will note he uses the word "lunar" moon.
(remember Debussy's *Claire de Lune* that we heard
earlier in the class?)



<http://www.youtube.com/watch?v=9QdGUJss9BU>

Now let's listen to a piece from the *Pentecost Mass – Communion*. Listen for various bird calls. Also listen for pools of waters.



<http://www.youtube.com/watch?v=ViX83zCIYxE>

How many bird songs are in this piece?
Let's listen to the quiet slow part again.

I play on this manual that has this type of sound, then I press something and it changes.

This part reminds me of the water and then who shows up but the cuckoo bird.

If you have the score show it to the students.

- Are the notes complex?
- The score shows how the organist should play the composition.
- They like to see where the cuckoo sings.
- Can you find other bird songs?
- Very unusual music!
- It gives you an impression of birds and water.

Other possibilities:

♦ Video showing references to bird songs, various photos of Messiaen, demonstration of an American wood thrush song and how Messiaen creates a musical selection based on that bird song.



<http://www.youtube.com/watch?v=0MgLXeaf3zc>

♦ Web page of five of Messiaen's birdsongs. You can hear the actual bird song and then how the song was set in a musical composition.

<http://www.oliviermessiaen.org/birdsongs.html>

My Life

I began to compose at age 7.

At age 11 (1919) began my musical studies at the Paris Conservatoire.

Studied counterpoint, fugue, piano accompaniment, organ, improvisation, music history and composition

At age 21 (1929) published first pieces (*Eight Preludes for Piano*)

At age 22 (1930) appointed Organist of La Trinité Church in Paris. I worked here for 62 years until my death in 1992.

At age 26 (1934) married violinist Claire Delbos.

At age 29 (1937) my son Pascal was born.

When I was 30 years old what was happening in the world? That would have been 1938.

WWII, Adolph Hitler was moving through various countries.

I fought against Germany and Hitler's invasion of Europe. That is why I'm wearing my beret. I was in the army.

My battalion was captured. I was taken to a prisoner of war camp. There were 5,000 other prisoners with me.

There were other musicians there also.

I made friends with a guard and he brought me music paper, and an old broken piano.

Some other prisoners played the cello, violin, and clarinet.

One musician playing alone is called a solo;

Two playing together is a duet;

Three make up a trio;

What do you call it when four musicians are playing together? Yes, a quartet.

In 1940-41 when I was held in the German prisoner of war camp in Silesia, I composed the *Quartet for the End of Time* using the only instruments available at the camp: clarinet, violin, cello and piano.

How do you think the music would sound in a war camp (tears of sadness)? How would you feel if you were in a war camp?

Messiaen colors the despair with some hope. The music moves slowly, not energetically.



Louange à l'Eternité from *Quartet for the End of Time*
<http://www.youtube.com/watch?v=SkwBEpSfuYg>

What does this music make you think of?

Here is another movement from the *Quartet for the End of Time*. It is a bit happier.

You will notice an artist is creating a sand painting in response to the music.



<http://www.youtube.com/watch?v=qxYpca0KzQs>

Notice the correlation of the movement of the hand and the sound of the music.

Same hand, same music.

This is one of the happier movement rather than the other movement.

Maybe it is hopeful music that all of this turmoil will end soon.

Again this is another form of impressionism. It is giving us an impression once again.

At age 51 (1959) my first wife, Claire Delbos died.

At age 54 (1962) married Yvonne Loriod, a brilliant pianist who was a great advocate and inspiration of much of my music.

I traveled all over the world playing music.

I taught at the conservatory.

I was inspired by nature and color.

We had two children but they were not musicians.

At age 75 (1983) I wrote an opera, *Saint François d'Assisi*, based on the life of St. Francis of Assisi, who loved birds and all animals. The stage lighting of this opera reflects the colors that I see when I hear my music.

At age 95 I died on April 27, 1992 in Paris.

CLOSING ACTIVITY

Listen to an excerpt from the *Turangalila Symphonie* (Messiaen music for orchestra)



<http://www.youtube.com/watch?v=Tv67YkOWJNA>

Joy of the Blood of the Stars is the translation of this title. This is a big concerto written for many instruments especially the piano. It is played by young musicians except for some keyboard players.

Very energetic music! Notice the rhythm pattern that is repeated through the piece.

Review what has been learned (as time permits).

Additional Areas of Inquiry (if time permits)

Talk about pitch needed to replicate a bird song
High, not low.

Pull out a couple of pipes an octave apart
Which will sound lower?

Talk about "octave"

(Sing *Take Me out to the Ball Game*
or *Somewhere Over the Rainbow*)

Play lowest pipe in K Jr – 2' long

Define that an octave is a relationship of 2:1

An octave higher is 1' long

An octave lower is 4' long

Next octaves lower are 8', 16', 32', 64', 128', 256'

The 20th century French organ has a lot of different colors. Some are of overwhelming volume.

Messiaen loved the idea of being dazzled or overwhelmed in sound.

Note that many different colors are in the scarf and how they are woven together. Relate this to colors of the organ stops.

Explore how combining stops is like combining threads (or paints) to create different sounds or colors.

Changes in colors is done by changing organ stops, either done by hand or done by a "piston."

MEET THE KING OF INSTRUMENTS

THE KOTZSCHMAR ORGAN

Upon completion of the artist-in-residence visits on the sounds of the pipe organ and the “colors” of Messiaen’s music, the students attend a concert at Merrill Auditorium in Portland, Maine with the mighty Kotzschmar Organ. Ray Cornils, the Municipal Organist for the City of Portland revisits the concepts taught in the classroom and creates many “colors” of sounds for the students.

The program presents classical compositions as well as familiar movie themes that are quickly recognized by the students. A concert in a large concert hall is often a first experience for many students. When time and distance prohibit a school to come to Portland an organ in a local church may be substituted.

The concert program is about 40 to 50 minutes in length. Since the Kotzschmar Organ was built by Austin Organ Company, students can walk inside the organ to see the inner workings of the instrument.



Students proceed through the various chambers of the windchest looking at the various pipes, swell boxes, blower reservoir, wiring, and movement of the

pneumatic actions as docents explain the component pieces. An up-close view of the five-manual console with many stops impresses the students with all the different sounds that can be sounded. If the concert is in a church and there is a possibility of viewing the windchest, small groups of students can walk through or look into this space.

During the times that a church is used small groups of 6-7 students go on the tour of the windchest and preview architectural highlights of the church such as stained glass windows.

Another group of 6-7 students is working on scavenger questions as the organist continues to perform. Students receive a question such as:

- ◆ Who built this organ?
(Hint: look for the nameplate on the console)
- ◆ What city did the organ builder work in?
(Hint: look for the nameplate on the console)
- ◆ How many pipes are in the façade?
(A façade are the pipes that you can see – they are painted beautifully)
- ◆ How many manuals does this organ have?
(Remember: a manual is a keyboard played by the hands)
- ◆ How many pedals does this organ have?
(Remember: a pedal is a key played by the feet)
- ◆ Do you think this organ was ever pumped by hand?
(Hint: What year was the organ built? Look on the console.)
- ◆ How many stops does this organ have?
- ◆ What year was the organ built?
(Hint: look for the nameplate on the console)

This allows students a close up view of the console and the artist-in-residence playing. During this time the rest of the students work on a word search puzzle about component pieces of an organ.

This experience has been a highlight of the students’ exploration of the pipe organ and its sounds. As partnerships are established between FOKO and the schools, the new class of students is always asking, “When do we get to go to see the big organ?”

A SAMPLE PROGRAM

Ray Cornils, *organist*

Nicholas Bowden

Trumpet Tune

Leon Boëllmann

Prayer

J. S. Bach

Little Fugue in G Minor

Jesu, Joy of Man's Desiring

Noel Rawsthorne

Dancing Feet

Richard Wagner

Bridal Chorus

Olivier Messiaen

Joie et Clarté des Corps Glorieux

Jeremiah Clarke

Prince of Denmark's March

John Williams

The Imperial March from *Star Wars*

Hermann Kotzschmar

The Leviathan March

Charles-Marie Widor

Toccata from *Symphonie V*

A FIELD TRIP

TO A

LOCAL PIPE ORGAN

Ideally, every project will culminate in a field trip to a pipe organ in the community. Not only will students have an “ears on” experience of live music (growing rare in these days of digital media), but they will have an “eyes on” experience as well. Their interest and excitement will be evident as they gather around the console to see “how it all works.”

Whenever possible, young organ or piano students are encouraged to have a “hands on” experience as well. The thrill of playing a pipe organ for the first time is never forgotten!



A piano student's first experience playing the pipe organ at First Parish Church, Brunswick, Maine.

PRE-VISIT ACTIVITIES

1. Color Bubbles

adaptable grades K-8



ACTIVITY

Introduction:

Review primary and secondary colors. Show a large container of clear bubble soap and blow a bubble by dipping the straw in and blowing slowly. Pour a little bubble soap into 3 small containers and add a primary color to each of the containers. Blow a bubble from each container and transfer it onto a piece of watercolor paper where it will pop. Overlap a few bubbles to demonstrate the colors mixing. Vary the size of the bubbles.

CLOSURE

Discuss what happened when you blew one colored bubble over a different colored bubble. Which are the primary colors? Which are the secondary colors? Were there any other colors that you discovered? Encourage students to express their impressions of the bubble print by writing a brief description to go with their bubble print. Display in the classroom.

VOCABULARY

Hue/Color = property of color

Primary Colors = red, yellow, & blue

Secondary Colors = orange, green, & violet

Tint = color with white added

Shade = color with black added

MATERIALS

- ◆ Red, yellow, and blue food coloring
- ◆ Bubble soap solution (either mix your own or buy a container of solution)
- ◆ Watercolor paper
- ◆ Small containers
- ◆ Straws



2. Color Mobiles

adaptable grades K-8

This exploration of color highlights the differences between warm and cool colors. The “hoop” creates a three-dimensional artifact for display in the classroom. Working in small groups fosters cooperative learning.

MATERIALS AND PREPARATION

1 embroidery hoop for each group of 2-4 students,
Washers

Thin string or embroidery floss cut into 3' strands,
about 8 strands per group



Scissors, glue, any thin material with color: magazines, colored paper, pre-painted paper, fabric, and pre-cut examples of warm and cool colors

VOCABULARY

Tint = color with white added

Shade = color with black added

Hue/Color = property of color

Warm and Cool Colors

ACTIVITY

Introduction: Pose the following questions to the students: What are tints and shades?

Which colors are warm? Which colors are cool?

Show the students a variety of cut shapes of colors from magazines or colored paper. Ask the students to identify each color and which are cool and which are warm. Have students organize them in two different piles.

DEMONSTRATION

Show the class a finished color mobile. Now that the students have a large pile of warm or cool colored paper, demonstrate cutting the paper into interesting shapes and gluing them into the string. Find 2 pieces of paper and cut them at the same time. Place the string in between the paper and glue into place. When one strand of string has been completed, tie it to the embroidery hoop with a washer at the end. The washer will give the string weight so it falls straight. When all the strands of string have been filled up and attached to the embroidery hoop, tie string to the top of the embroidery hoop so it can hang from the ceiling.

3. Abstract Bodies

adaptable grades 3-8

MATERIALS AND PREPARATION

Large section of paper painted to look like a forest or woodland environment. This could be prepared by the teacher, or use another class period to have the students do this step.

- ♦ Red, yellow, and blue tempera paint.
- ♦ Paper plates
- ♦ Large paint brushes
- ♦ Permanent markers
- ♦ Paper towels

VOCABULARY

Hue/Color = property of color

Primary Colors = red, yellow, & blue

Secondary Colors = orange, green, & violet

MATERIALS

- ◆ Large section of paper cut into a few 10-foot sheets, placed next to each other on the floor
- ◆ Black marker
- ◆ Rulers
- ◆ Scissors
- ◆ Paint
- ◆ Paintbrushes
- ◆ Large viewfinders (various wooden or metal frames, or use fingers to create a rectangular frame)

QUESTIONS

What are primary/secondary/tertiary colors?

What is abstract art?

How is it different from other styles of art?

What is a composition?

How do you achieve an interesting composition?

ACTIVITY

Introduction: Students sit around large lengths of paper. Show the class examples of abstract art vs. realistic art. How are they similar/different? How are the shapes different between the two pieces? What's the difference between an organic and geometric shape? Which do you prefer?

Explain the first part of the exercise: tracing each other's body on the large lengths of paper. Have two volunteers demonstrate. One student will lie down on the pieces of paper while the other traces. They trade positions. The second student lies down in a different position on a different spot on the paper, overlapping the first traced body. Encourage students to get into action poses. Remind them to overlap each other's tracings and to take their time tracing.

Have the students take a step back and look at all the lines and shapes created by the first activity. They will now use the viewfinders (frames) to find an interesting composition within the group exercise. What makes an interesting composition? Once they find their composition and cut it out, they will paint in all the different shapes for their abstract piece of art.. Discuss primary/secondary/tertiary colors. Which colors look pleasant / harsh together?

CLOSURE

Hang each student's piece up for display. Allow the students to title their piece and to describe what it looks like using the prompt "How do the colors enhance the shapes?" If actual wooden or metal frames were used, frame and mat the pieces.

4. Colorful Birds

adaptable grades K-8

QUESTIONS

What are primary colors?

What are secondary colors?

Which colors do you mix together to get them?

What do you mix to get brown?

ACTIVITY

Introduces primary colors: There are 3 paper plates on a table: 1 filled with red, 1 filled with yellow, 1 filled with blue paint. Three selected students pick a primary color to paint onto their hand. They apply their hand onto the large section of paper. The students reapply paint and the teacher asks Red and Yellow to shake hands and then print their hand again. Repeat this process for each secondary color. (Plastic gloves may be used for one hand if painting the actual hand is not appropriate.)

In groups of 3, each student is responsible for one of the primary colors. They take turns shaking each other's hand and printing the new color on the large ream of paper. Students should either wash their hands completely or wipe their hands on paper towel in between handshakes. Encourages the students to experiment with how much paint each student uses and how thoroughly they shake their hands. They may also want to try dragging their hand while printing to create a body or feathers of a bird. Demonstrate how you can transform the printed hands into birds (draw eyes, beaks, feathers, etc.) using markers.

CLOSURE

Hang the mural up in the hallway for everyone to enjoy. Allow the students to name the piece of artwork. Review vocabulary words and different techniques for mixing colors they used today.

5. The Color of Feelings

adaptable grades K-5

In this activity, students will explore poetry from the book *Hailstones and Halibut Bones* by Mary O'Neill, will further explore the meanings of color through the book *Living Colors* by Steve Jenkins, and will create a list of feelings and corresponding colors while creating "feelings pictures". These lists and artwork will be used in a post-visit activity.

ACTIVITY

♦ Ask students to name their favorite colors and list these on the board or on chart paper. Encourage students to tell you how these colors make them feel and list these words beside corresponding colors. Share poems from *Hailstones and Halibut Bones* by Mary O'Neill (suggestions: "What is Brown?", "What is Blue?", "What is Orange?", "What is Red?", "What is Green?", and "What is Yellow?"). Also share the last page. "The colors live..."

♦ Further explore color and the messages of different colors by sharing the book *Living Colors* by Steve Jenkins, adding to the students' list of colors and corresponding emotions.

♦ Have students create "feelings pictures." Have students decide upon a feeling they wish to express, select the color(s) they feel will express that feeling, and use different shades of that color to cover a page. Older students may choose more than one emotion to express ("mixed emotions") and can blend two or more shades of color on a page.

♦ Teacher or student then writes the "feeling word" in marker over the colored background. Students and teacher can then mount the work on colored paper and create a "Color of Feelings" gallery.

MATERIALS

- ♦ Unlined paper of different sizes
- ♦ Art supplies – crayons, oil pastels, colored pencils, paints and brushes
- ♦ *Hailstones and Halibut Bones* by Mary O'Neill ISBN 978-0-385-410-78-6 Random House
- ♦ *Living Colors* by Steve Jenkins ISBN 13: 978-0-618-70897-0 Houghton Mifflin

6. The Color of Birdsongs

adaptable grades K-8

In this activity, students will listen to birdsongs and will use crayons or other art materials to express the feelings the birdsong evokes. Older students will also write words that express the feelings, images, and impressions evoked as they listen to birdsong.

ACTIVITY

♦ Discuss how many things cause feelings – words, pictures, sounds, music, etc. Have students describe a sound or a picture or other image that caused them to feel something and ask them to describe the feeling.

♦ If students are not familiar with Messiaen, briefly describe him as a composer who listened carefully to birdsong and used it in his music. Also briefly describe how Messiaen experienced color when he heard or imagined music.

♦ Listen to birdsongs, (YouTube selections one and two). Younger students use crayons to "color the feelings" they have as they listen to birdsong.

♦ Older students use the same materials, and also list words to describe the feelings they experience as they listen to birdsong. They may wish to sketch images as well. Discuss what students hear – pitch, melody, repeating patterns – and how it makes them feel or think of. Have students share what they have recorded and develop a class list of feelings words with colors that "match" feelings.

MATERIALS

- ♦ Unlined paper of different sizes
- ♦ Art supplies – crayons, oil pastels, pencils
- ♦ *Music for the End of Time* by Jen Bryant and illustrated by Beth Peck, ISBN 0-8028-5229-7



selection one

<https://www.youtube.com/watch?v=wKhFZPefb64>

selection two

https://www.youtube.com/watch?v=m6xBRts6J_E

7. Create Your Own Instrument

adaptable grades K-5

This activity creates various instruments using materials easily found at home or in an art room. After the organist visits there is a post-activity that uses the instruments for a concert.

ACTIVITY

- ▶ With students, locate Paris, France and Gorlitz, Germany on a map or globe. Read aloud *Music for the End of Time*. Discuss with students the challenge of creating music with limited instruments.
- ▶ Challenge students to work in small groups to create instruments and practice playing them for each other.

MATERIALS

Music for the End of Time by Jen Bryant and illustrated by Beth Peck, ISBN 0-8028-5229-7

A variety of objects for making musical instruments, such as:

- Coffee cans, oatmeal containers
- An assortment of rubber bands, variety of length and thicknesses
- Paper towel tubes
- Duct tape
- Small lidded containers (yogurt, baking powder, drink bottles)
- Dried beans, seeds, uncooked rice or pasta, small pebbles, etc.
- Pencils (6-8" lengths)
- Sticks
- Plastic or glass bottle of various sizes
- Small hair combs
- Squares of thin paper cut into 2"x2" sizes
- Plastic or paper drinking straws (paper works best)
- Small, sturdy cardboard boxes
- Similar sized pot covers
- Yarn or ribbon

SUGGESTED INSTRUMENTS

BOTTLE FLUTE

Materials: Plastic or glass bottles of various sizes

Directions:

1. Blow across the top of each bottle until you produce a sound.
2. Notice how the sound changes as the size of the

bottle changes.

3. Add water to the bottles and notice how the sound changes with different amounts of water.

COMB CLARINET (a "woodwind" instrument)

Materials: A small hair comb, squares of thin paper cut into 2"x2" sizes

Directions:

1. Hold the comb so the teeth point toward you.
2. Use your thumbs to hold a small piece of paper loosely on the comb.
3. Put your lips lightly on the comb and the paper so they hold the paper on the comb.
4. Blow air across the paper and hear the sound it makes as it vibrates.

RUBBER BAND STRINGED INSTRUMENT

Materials: A small, sturdy cardboard box, an assortment of rubber bands, variety of length and thicknesses, a paper towel tube, duct tape

Directions:

1. Cut a hole about 4" in diameter in the top of the box.
2. Stretch 4 to 6 rubber bands around the box and move them over the hole, lined up like violin or guitar strings.
3. Slide a pencil in under the rubber bands on one side of the hole. (This acts as the "bridge.")
4. Tape one end of the paper towel tube on the end of the box opposite the side with the pencil. This is the "neck" of the instrument.
5. Strum or pluck the rubber bands. Notice different sounds from different rubber bands – higher pitched sounds from thinner and tighter strings; lower pitched sounds from thicker and looser rubber bands.

PERCUSSION INSTRUMENTS

Materials: Coffee cans, oatmeal containers, sheet of heavy plastic like a plastic garbage can or large balloon, duct tape, small lidded containers (yogurt, baking powder, drink bottles), dried beans, seeds, uncooked rice or pasta, small pebbles, etc., pencils (6-8" lengths), sticks, similar sized pot covers

Directions: Use containers and plastic to create drums, lidded containers and loose dried materials to create shakers, and pot covers to create cymbals

POST-VISIT ACTIVITIES

After the visits of the Artist-in-Residence, teachers may wish to follow up with some additional activities that build on the new knowledge and skills that the students learned. The following visual, performing arts, and language arts activities are presented for your selection.

1. Birdsong Dances adaptable grades K-8

SYNOPSIS

Students will use the lists of feeling and color words, and the artwork representing the colors, feelings, and images evoked by birdsong developed in the pre-visit activities to create and share “Birdsong Dances.”

ACTIVITY

♦ Listen again to brief selections of birdsong from YouTube selections listed below.

♦ Review word lists artwork representing the colors, feelings and images evoked by birdsong developed in pre-visit activities.

♦ Challenge students to create “Birdsong Dances” that incorporate these feelings, images, and colors, and will be performed to birdsong selections of their choice.

♦ Younger and older students might use colored scarves as part of their dance.

♦ Students can work individually, with a partner, or (particularly with older students) in small collaborative groups.

♦ Have students perform their “Birdsong 2” for an audience

2. Create a Concert adaptable grades K-5

ACTIVITY

♦ Review the list of “Music makes me feel” words developed with students prior to “Messiaen’s” visit to the school. Reread *Music for the End of Time* by Jen Bryant and illustrated by Beth Peck if it has been awhile since the book was read to the students.

♦ Listen to YouTube Birdsong selections one and two. Discuss what students hear – pitch, melody, repeating patterns – and how it makes them feel. Listen to Messiaen describe birdsong used in his music: *Messiaen on Birds*, parts 1 and 2 (see below).

♦ With older students, watch YouTube video *Messiaen’s Use of Birdsong* (6 minutes), developed by the Philharmonia Orchestra, which features examples of Messiaen’s detailed study of birds and his ideas about using birdsong in music, and as music.

♦ Challenge students to work in small groups to compose a short piece using the instruments they created earlier, and their voices. With older students, perhaps have a few “real” instruments available as well.

♦ Have students prepare a selection to perform for others – the audience for the performance, and the length of the performance, depends on the age of the students.

♦ Older students can create invitations to the performance, posters advertising the performance, news articles and Public Service Announcements describing the performance.

MATERIALS

♦ *Music for the End of Time* by Jen Bryant and illustrated by Beth Peck, ISBN 0-8028-5229-7



♦ *Messiaen on Birds*, part 1
<https://www.youtube.com/watch?v=9QdgUJss9BU>

♦ *Messiaen on Birds*, part 2
<https://www.youtube.com/watch?v=xkKrD9knBvU>

♦ *Messiaen’s Use of Birdsong*
<https://www.youtube.com/watch?v=0MgLXeaf3zc>

♦ Birdsong selection one
<https://www.youtube.com/watch?v=wKhFZPefb64>

♦ Birdsong selection two
https://www.youtube.com/watch?v=m6xBRts6J_E

3. Messiaen

Fanciful Bird and Birdsong

adaptable grades 3-8

ACTIVITY

Before beginning this activity you may wish to replay the videos of Messiaen talking about birds and their song.



<http://www.youtube.com/watch?v=9QdgUJss9BU>
<http://www.youtube.com/watch?v=xkKrD9knBvU&feature=related>

Messiaen describes a bird from long ago with a very distinctive song.

The students are invited to create this legendary bird using a variety of materials, construction paper, tissue paper, foam, feathers, or other materials found in your classroom or art room.

After the design of the bird is completed, they're invited to create a song for the bird.

If you have access to a piano, wind instrument, or string instruments, students could experiment to create the bird song. Maybe the music teacher would assist in helping the students actually writing out the chords or notes that the student chooses.

For an extension of this have the students write about the bird, give it a name, describe its habitat, foods, and post on panels with their legendary bird and music score.



LUNAELLA

Hello! My name is Lunaella.

I am a mystical bird from long ago that followed the lunar phases of the moon at important times in my life. My family and I live on the top branches of the tallest trees in South America. Our food is found in bushes and plants (we are not

carnivorous). Our home is built into the nook of a tree with leaves and mud to hide from our enemies. Our song is very lyrical, but seldom heard, since we live so high above the ground!

4. Create a Stained-Glass Window

adaptable grades K-8

experience. During the organist lessons on Messiaen, students were given opportunity to view a stained glass window and look for shapes and "stories" in the window. Now the students can have their own opportunity to create a window that highlights their imagination.

Provide the students with white paper (either 8.5" x 11" or 11" x 17") and various shades of tissue or construction paper. Allow the students to cut the paper into abstract shapes and then, using a glue stick on the edge, place the colored paper on the white background paper overlapping sides if needed. Messiaen loved how blue and red overlapped in glass to create blue-purple shades. Once the paper is filled with tissue paper, use a broad tip black magic marker to make lines representing the "leading" of the stained glass.

Put 4 to 6 finished stained glass panels on a wall and have children see what objects they see or stories they

LUNAELLA'S SONG





can create from the shapes. Move panels around for different views. With a classroom set you have many opportunities to position the panels for use to create endless variations.

Panels could be given to a group of students and they could arrange the panels to their liking and report back to the class of the “imagination” wonder of their panels. They could write up their findings and display this with the panels in the classroom or art wall.

5. Messiaen Stories

adaptable grades K-5

ACTIVITY

Read, or re-read, *Music for the End of Time* by Jen Bryant. Have students summarize that story, and recall other facts about Messiaen’s life that they learned during “Messiaen’s visit” to the school.

Use fact sheet and timeline for Messiaen’s life that accompany these materials to help create a class chart with these facts and events.

Locate Avignon and Paris, France and Gorlitz, Germany on a globe or map. Show photos and video clips of Messiaen at different times in his life.

Discuss imagining a “small moment” to write about, suggested by the photographs of Messiaen’s life. Have students close their eyes and visualize the moment (see a movie in their minds) and then write about it. Encourage them to include small details by using their five senses as they imagine a “small moment” in Messiaen’s life.

Use the picture book *Salt Hands* to provide examples of including details in a small moment story.

Draft, revise, edit, illustrate, and publish stories. Share with each other and other classes, parents, and others.

MATERIALS LIST

- ◆ Maps and globe
- ◆ Paper, writing utensils
- ◆ Images of Messiaen
- ◆ Fact sheet and timeline of Messiaen’s life
- ◆ *Salt Hands* by Jane Chelsea. ISBN-10: 0140503218
ISBN-13: 978-0140503210
- ◆ *Music for the End of Time* by Jen Bryant, illustrated by Beth Peck. ISBN 0-8028-5229-7

6. Bird Stories and Poetry

adaptable grades 3-8

SYNOPSIS

In this activity, students will create poetry and stories about birds using lists of colors and corresponding emotions and artwork developed in a pre-visit activity (5. The Color of Feelings), by exploring the books *Original Water Color Paintings By John James Audubon For Birds Of America* and *Alphabet Bird Collection* by Shelli Ogilvy, by listening to some of Messiaen's works, and by viewing Messiaen discuss birdsong. Older students will create a "Poetry Out Loud" presentation.

ACTIVITY

◆ Review the lists of colors and corresponding feelings, and artwork, created in the pre-visit activity "The Colors of Feelings."

◆ View and listen to Messiaen's *The Black Wheatear* and *The Blackbird* (see YouTube links, below) and have students list the colors and feelings these works evoke.

◆ Explore the books *Original Water Color Paintings By John James Audubon For Birds Of America* and *Alphabet Bird Collection* by Shelli Ogilvy and ask students to list words, colors, and feelings they notice as they learn about each bird and explore the artwork in these books. Encourage students to imagine a specific bird or birds as characters in a poem or story.

◆ Listen to and watch "Messiaen on Birds I and II" (see YouTube links, below) to see how the composer used birdsong in his work. Note especially the words he used to describe some birdsong.

◆ Use lists of words, colors, and emotions, and the writing process, to have students write, edit, and revise a poem about a favorite bird, or a short story about a bird or a few bird characters.

◆ Have students illustrate their poems and stories.

◆ Publish these poems and stories in a class collection and share with other classes.

◆ *For older students:* Create "Poetry Out Loud" to be performed as *Outbursts of Joy* or *The Black Wheatear* or "The Blackbird" by Messiaen is played. Use the list of emotions and colors developed earlier. See samples of "Poetry Out Loud" in YouTube links, below.

MATERIALS LIST

◆ Lined and unlined paper of different sizes, colored pencils, crayons, pens, and pencils

◆ Lists of colors and corresponding emotions and artwork developed in a pre-visit activity ("The Color of Feelings")

◆ *Original Water Color Paintings By John James Audubon For Birds Of America* ISBN-10 0517249456 Random House

◆ *Alphabet Bird Collection* by Shelli Ogilvy ISBN-13 978-1-57061-618-1 Sasquatch Books



◆ "Bronx 6th Grader Wows NYC Poetry Scene" (7:09) <https://www.youtube.com/watch?v=yxLLu-scR9Y>

◆ "Poetry Out Loud Winner John Uzodinma" <https://www.youtube.com/watch?v=divJ7bcTag4>

◆ "Poetry Out Loud 2012 NJ State Finals: Brianne Barker" <https://www.youtube.com/watch?v=divJ7bcTag4>

◆ "Messiaen – *Transports de joie (Outburst of Joy)*, Joel Hastings" <https://www.youtube.com/watch?v=gCGveEzlw4>

◆ "Olivier Messiaen – *Catalogue d'oiseaux: Le traquet stapazin (Black-eared Wheatear)*" <https://www.youtube.com/watch?v=JE4vSviuoSw>

◆ "Olivier Messiaen – *Le Merle noir (The Blackbird)*" <https://www.youtube.com/watch?v=IhEHsGrRfY&list=RDJE4vSviuoSw>

◆ "Messiaen on Birds I" <https://www.youtube.com/watch?v=9QdgUJss9BU&list=RDJE4vSviuoSw>

◆ "Messiaen on Birds II" <https://www.youtube.com/watch?v=xkKrD9knBvU>

KOTZSCH-O-RAMA

INTEGRATED ARTS AND SCIENCE DAY

THE BREAKWATER SCHOOL EXPERIENCE

For two years the students of Breakwater School in Portland, Maine had instructional lessons on the pipe organ and came to Merrill Auditorium to hear the Kotzschmar Organ. The middle school students presented a proposal to be “Keepers of the Kotzsch” during this time and served as ambassadors at concerts and family events. The following section reflects the teachers’ story about a special day at the school devoted to a wide variety of activities and experiences all relating to the organ. They called it “Kotzsch-O-Rama.”

After completion of the artist-in-residence lessons the specialists (Essentialist Team: art, music, physical education, science teachers) approached FOKO’s education coordinator about how they would like to expand upon what the students had learned and integrate that knowledge into the visual and performing arts. From this initial discussion a collaborative atmosphere was created to provide the prekindergarten through eighth grade students with a special enrichment day. It was decided that each grade level would experience 4-6 twenty-minute sessions throughout the day, moving from one station to the next,

With the music of Messiaen as the impetus for each activity the students were lead through a variety of experiences. Messiaen loved stained glass and the students created a large tissue paper window that built from one class to another for the visual arts experience.

For an immersion of Oliver Messiaen’s music and various modes of artistic expression, several stations were presented to support a hands-on experiential day for all ages of students. Sand painting monotypes were completed by the students as an expression of how they “felt” the music spoke to them.

Music was blended throughout all the activities. But for this day the artist-in-residence brings in another type of organ for the students to do a scavenger hunt of comparison between the organs from the classroom lessons. Mr. Cornils used a continuo organ for a compare and contrast session.

Expression of your emotion, and thought, through the written word, involves the student writing poems or prose about “color” or the emotion of the music.

Our bodies seem to naturally move to music. The movement experience takes students through a variety of genres of music to explore how one would “move” to a particular selection of music.

The lessons on the pipe organ open the door for a scientific experiment to experience sound waves and how they move through the pipes to create sound.

This action packed day provides many opportunities for students to delve into the music of Messiaen and their response to his music with fantastic results!

The lessons in this section are presented by the Essentialist Team as a basis for you to organize a festival day for a select grade level of students or the full student body.

Enjoy the day!

Kotzsch-O-Rama: *Music, Emotion, and Visual Arts*

Exploring Connections

LEARNING OBJECTIVES

- ▶ Students will relate visual elements to musical elements using scale, color, and layers of media.
- ▶ Students will use light and transparencies as well as opaque media to represent layers of sound, chords, measures, and movements.
- ▶ Students will compare and contrast which visual materials best represent the auditory experience.
- ▶ Students will develop and harmonize pictorial themes, as a composer would write music, by weaving signs and symbols into collage and mixed-media work.

CAPTURING INTEREST

Arthur Dove's painting *Foghorns* is an example of one attempt to create a visual manifestation of sound. Students were invited to speculate on other ways this might be done.

SET-UP

Three stations offered opportunities for the visual exploration of sound in ways that were deliberately open-ended and process oriented.

ACTIVITY

Students in multi-age groups moved through the studio in 20-minute time frames. Each student got to explore each station. Like music moving through time and space, workshop provocations and materials were meant to be used in an ephemeral manner. The intention was to have the art-making reflect the fleeting nature of time and sound. Students who wanted to capture a moment of their process were offered a camera or the chance to print a sand painting.

MICRO LESSONS

station 1

Light Tables/Shapes and Transparencies

The light screen is an experimental station where objects are represented to match students' feelings of the music. The bouncing and reverberation of light from mixed media and light boxes echoed the movements and layered sounds of the organ music. After completion the students took a photo of the rendering and then put materials away for another

group to explore. One child responded: "The music is dark so I used a lot of heavy and black materials to build my sculpture."



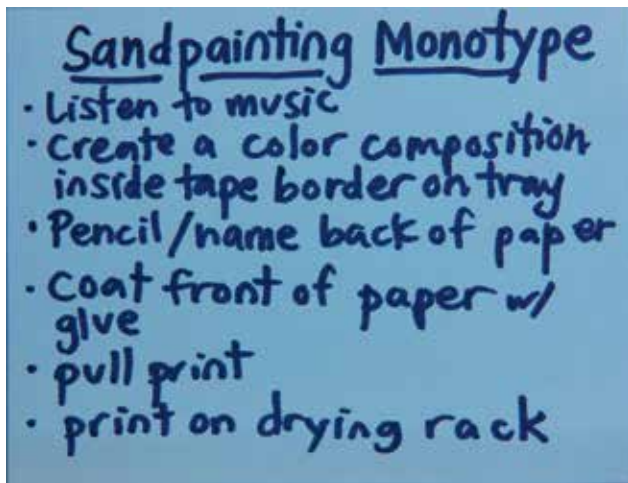
station 2

Acetate and Tissue Paper

Reproductions of the artist Paul Klee's work were prominently displayed at this workstation. Students were asked to notice and emulate the ways Klee interpreted musical structures and rhythms in his paintings.

The students selected pieces of acetate and tissue paper and glued them to the large poster board. Each group added to the board so at the end of the day there were layers of tissue paper that showed new hues as colors overlapped. The "stained-glass" mural was displayed in the lobby.





station 3

Sand Painting and Monotypes

Unfixed sand paintings have a long established cultural history in numerous social groupings around the globe, and are often temporary, ritual paintings prepared for religious or healing ceremonies. The Navajo people, Tibetan and Buddhist monks, as well as Australian Aboriginal people seek solutions to problems and communicate with other realms through the meditative making of sand painting. Students were asked to seek wisdom through sound and to create sensory experiences for themselves that awoke other pathways. A brief lesson on making monotypes and photographing one's own work was also given.

Multi-age groupings and inclusive station settings led to sharing ideas and working together on shared goals. The culture and climate of each group that moved through the studio had an effect on the kind of work that was produced. For example, older groups tended toward the big mural projects. Younger groups often worked in pairs side by side.

ASSESSMENT

Documentation of student work and conversations provides deep assessment of learning outcomes. In the days since the Kotzsch-o-rama, connections keep resurfacing in class work and in dialog with students.

For example, color-mixing lessons in paint were supported by discovery in workshops because when two transparent materials are layered, the color is visually mixed. The idea of composition in art has taken on musical qualities of beats, measures, and the passage of time in recent narrative paintings. In social studies units about the European and Harlem

Renaissance periods, students intuitively understand the way art forms are connected.

CAPTURE and SHARE

Students and teachers alike have had the opportunity to reflect on and share our experiences. This documentation and show of work demonstrates and makes our learning visible

MATERIALS

♦ CD Player or Internet connection with audio capability

Station 1

- ♦ Light screen
- ♦ Any materials that will show dimensions:
 - plexiglass pieces
 - blocks in various colors,
 - canning jar lids
 - lego blocks.

Station 2

- ♦ Tissue paper
- ♦ Large poster board
- ♦ Glue
- ♦ Scissors

Station 3

- ♦ Colored sand
- ♦ 5" x 5" squares of tagboard
- ♦ Glue
- ♦ Trays
- ♦ Small cups for sand

REFERENCES

Arthur Dove's painting *Foghorns* (1929):

<http://www.wikipaintings.org/en/arthur-dove/foghorns-1929#supersized-artistPaintings-308780>

Paul Klee: *Painting Music*.

Describes and illustrates how, from his earliest work as both painter and musician, Klee focused his efforts on combining these two related art forms.

(Duchting, 1987. Reprint: Prestel, 2012)

ISBN-13: 978-3791347509

Submitted by: Kelly McConnell, Art Essentialist, Breakwater School, Portland, Maine.

Kotzsch-O-Rama: *Early Childhood Artists* *Paint to the Music of Messiaen*

CAPTURING INTEREST

Readings from *My Many Colored Days* by Dr. Seuss introduced the notion of possible relationships between mood, emotion, and color. Students were encouraged to express their own feelings about specific colors.

ACTIVITY

Next, each class brainstormed how different colors make *them* feel: “Reds=mad, sparkly, like fire. Blue=tired, spacey cold.” I asked the children if music had moods as well, and if so, what kind of music made them feel like which colors? “Fast, loud music like drums = happy energetic. Slow, soft, tinkly music = quiet, sleepy.”

I explained that there was a musician named Messiaen who was famous for saying that he could see colors when he listened to music, and when Mr. Cornils visited the next day we would paint the colors and moods we felt as we listened to the music of Messiaen.

SET-UP

On Kotzsch-O-Rama Day, the Early Childhood Art Studio was set up with five separate painting stations. Three stations had plastic laminate stretched across frames of various sizes with acrylic paint in several colors. There was also a table with watercolors and pastels and four easels with tempera paints in the same color palate. We had children ages 3-6 come

together for multiage arts exploration. We shared our brain storming results with Mr. Cornils and he spoke of Messiaen and his synesthesia. Then we were ready to paint!

We played Messiaen’s *Quartet for the End of Time*, changing movements (and mood, colors and brush strokes) every few minutes. For twenty minutes the children painted and listened intently, commenting at times: “*This* is fast, it sounds yellow and splotchy!” Or, “Now the music is slow, I’m going to use purple and make lines.” Working on clear laminate added the thrill of seeing what marks others were making simultaneously to the same piece of music.

TIME FOR REFLECTION

When we were finished, we gathered for a group reflection time. The children visited each station and commented on their fellow artists’ work. Many saw images in the scrawled, splattered and mixed paint of their friends. (“That looks like a roller coaster!” The music made me *think* of a roller coaster.”) While other noticed similarities like, “I made polka-dots when the music got fast, too!” The music and life of Messiaen exposed the Preschool and Kindergarten artists to the many ways one can perceive and express emotions.

Submitted by: Mari Dieumegard, Early Childhood Art Essentialist, Breakwater School, Portland, ME



Kotzsch-O-Rama: *Standing Waves and Nodes* *Where Music Comes From*



LEARNING OBJECTIVES

- ▶ Explore waves on a slinky bouncing back (the interference of the bounced wave and the initial wave create the standing waves).
- ▶ Predict, Compare, and Contrast various standing waves on a slinky.
- ▶ Explore the connection between length of a pipe (or boomwacker) and pitch.
- ▶ Predict, Compare, and Contrast the pitch of a pipe and whether one end is closed (with a cap) or both ends open.
- ▶ Explore other musical instruments pitch – and where sound comes from.

CAPTURING INTEREST

As this station was immediately after the students experienced the Kotzschmar Junior, they were shown a guitar and the teacher played an open string and posed the following question: “How can I play a different note?” And, then asked them where sound comes from in an organ.

MICRO LESSON

Students were asked to speculate about the relationship between the length of a boomwacker and the sound – students had experience with boomwackers prior to this lesson. Exploring the changing sound when a cap was placed on one end followed this up.

Waves were sent down a slinky and students were asked to predict what would happen when the wave reached the end.

Standing waves were demonstrated and students were exposed to the terms “node” and “anti-node.”

Overtones were demonstrated on the slinky.

The relationship between the frequency of the standing wave and the tightness of the slinky were explored (simulating the tightening of a guitar string).

The relationship between frequency of the standing wave and the length of slinky used were explored (simulating shortening a guitar string by placing a finger on a fret)

The frequency of different slinkys was explored (simulating the difference between strings on a guitar).

Student demonstrating
the “boomwacker.”



Submitted by:
Martin Lodish
Breakwater School
Portland, Maine

Kotzsch-O-Rama: *Organ Exploration*

LEARNING OBJECTIVES

Through scientific inquiry, students will expand their interest in and understanding of the pipe organ by comparing the continuo organ to the organ used in their school experience.

The activity assumes students have already had an organ exploratory with Kotzschmar Junior within the last year.

MATERIALS

Continuo Organ

MUSIC

J.S. Bach: Minuets in G Major and G Minor from the *Anna Magdalena Notebook*.

German: *Festive Trumpet Tune*

Bach: *Pastorale*

CLASS SET-UP

Time needed: 20 minutes for each group

Group size: Best for up to 25 students

LESSON DEVELOPMENT

1. Play music on the continuo organ as students enter

2. Welcome students and reintroduce yourself

3. Observation and Deductions

Ask questions of the group:

Is this an organ?

Some will say no – can't see pipes, no pedal board, etc

How is this different to Kotzsch, Jr.?

How is this similar to Kotzsch, Jr.?

Divide the class into 4 or 5 groups of 4-6 students.

Inform class that everyone will have a chance to come up and watch and look at the instrument.

Have a group come up, while playing, have them observe what they see.

After a minute, have students report to the class what they see.



Repeat this several times, allowing each group to come up.

Probable observations for the different components of the organ.

Group 1: Different pipes within the organ

- ◆ Open, stopped pipes
- ◆ How the organ is tuned by moving stoppers
- ◆ Different sizes
- ◆ All pipes are wood, no metal pipes

Group 2: Stop levers

- ◆ Which stop levers control which pitches (8, 4, 2 – low medium and high)
- ◆ Follow how levers connect to the 3 ranks
- ◆ Note length of pipes and correlation to low, medium and high
- ◆ Note how sliders move – “swiss cheese sandwich”



Detail of “Kotzschmar, Jr.”
showing interior of windchest; keyboard;
pedal pull-downs

- ◆ Note when you move the lever to the right, the slider moves to the left because of a fulcrum – simple machines, see-saw
- ◆ Hear highest and lowest pipe

Group 3: Key action

- ◆ Note how it connects to the wind chest
- ◆ Push a note down and ask the student to identify the “sticker” by number (they are numbered)
- ◆ Do this several times, the last time do low C
- ◆ Notice how the sticker is not where you expect it to be
- ◆ Have them explore how this happens. They will find the “roller” nested under the keyboard
- ◆ Find the correlation to the longest pipes of the organ found at the right hand side of the case, rather than the left hand side of the case.

Group 4: On/Off switch

- ◆ Have them hypothesize what will happen when you turn off the organ. They will say that it will stop playing.
- ◆ Actually try it and notice how it takes time for it to stop playing
- ◆ With the organ off, start playing, then turn the organ. Enjoy how it comes back to life.

- ◆ Make connection of the organ lungs with human lungs. How long can you sing a note until you run out of breath – Count as various students try to outdo each other.

Group 5: Explore the wind chest

- ◆ Turn off the blower
- ◆ Have four students carefully unscrew the bung board to the wind chest. Don't loose nut and washer!
- ◆ Once off, turn on the blower, play the organ and see if it works.
- ◆ Why not? Organ needs air pressure and it is escaping!
- ◆ Put bung board on, but not screwed in. Does it work?
- ◆ Reassemble the wind chest. Have we “rescued the patient”?

Use the rest of the time to answer questions, play the organ or have students play. Use this as a time to review what they have experienced.

Submitted by: Ray Cornils, Portland Municipal Organist

Kotzsch-O-Rama: *Music, Emotions, Creative Writing*

CAPTURING INTEREST

The connection between music and emotions plays an integral role in the creative writing process. Many authors use music to reduce distractions, increase focus, and create specific emotions and moods for creativity while writing. The calibration between the music being listened to and the scenes or topics being written about is extremely important to create an optimal creative environment. The music's tone, rhythm, tempo, instrumentation, and lyrics can dictate the spectrum of emotions that it creates in its listenings, and so an author must select the appropriate music to create the appropriate emotions for their writing.

During our Kotzsch-O-Rama event, a classroom was used as the environment for small, multiage groups to explore the connection between music, emotions, and writing. During their time in the classroom, students listened to different styles of music and expressed their emotions through coloring, drawing, and writing. Younger students wrote down words, while older students wrote down emotions or complete scenes. We then made an audio recording of the children reading the writing that they had written with the music in the background.

LEARNING OBJECTIVES

- ◆ Explore connections between music and emotions.
- ◆ Learn about the French composer Olivier Messiaen and synesthesia, the neurological condition that results from an overlapping of the optical and auditory nerves that creates visual reactions to sounds.
- ◆ Investigate the relationship between sounds and music to colors and feelings.
- ◆ Experience the creative process of drawing and writing to record the specific emotions that music can evoke.
- ◆ Create a final audio recording.

MICRO LESSON

Each group visited the classroom for 20 minutes. Sessions began with a personal reflection from the teacher about his love of writing and the use of music to combat his own distractibility and create emotions in his writing process. For the younger students, excerpts were read from the book *Hailstones and Halibut Bones* by Mary O'Neil. The poems in this book reveal how colors can express emotions, feeling,

sounds, textures and relationships. For older students a short discussion ensued about the connection between music, emotions, and writing, the introduction of the French composer Olivier Messiaen, and the concept of synesthesia.

As time allowed, students listened to a CD with the following song list:

- ◆ Messiaen's *Quartet for the End of Time*
- ◆ Wynton Marsalis's *Ghost in the House*
- ◆ J.S. Bach's Toccata and Fugue in D Minor
- ◆ A Moroccan piece entitled *Hafuz*
- ◆ Los Lobos's *La Guacamaya*

Students wrote while the music played. Younger students were instructed to use drawings and colored pencils to reflect their reaction to the music. Older students were encouraged to write words, poems, and scenes that the music evoked.

ASSESSMENT

Documentation of student work and conversations provides deep assessment of learning outcomes. All written products were typed and printed, and can provide teachers and students with an assessment tool for each student's emotional and literary development.

The final recording is going to be burned onto a CD and shared with the different classes that participated in the activity, which will continue the dialogue about the connection between music, emotions, and the written word.

Submitted by: Peter "Bridge" Bridgford, Academic Adventure Essentialist, Breakwater School, Portland, Maine

Kotzsch-O-Rama: *A Physical Education Teacher's Approach*

ACTIVITY

Physical interaction to the music of Duke Ellington in 20-minute sessions for groups of 10 to 15 students.

CAPTURING INTEREST

Students enter the classroom to the sound of Duke Ellington's *It Don't Mean a Thing (If It Ain't Got that Swing)*.

LEARNING OBJECTIVES

Students will develop motor skills and apply these to enhance their movement and physical performance. Students will also use their bodies to create movements that represent sounds

SET-UP

- ◆ Open space for movement
- ◆ Digital Projector and Screen
- ◆ Pieces of colored fabric and colorful scarves
- ◆ CD of music by Duke Ellington

THE VIDEO

Project the YouTube video of Duke Ellington and His Orchestra playing *It Don't Mean a Thing*.



Duke Ellington: *It Don't Mean a Thing*

<https://www.youtube.com/watch?v=qDQpZT3GhDg>

Freeze-frame video occasionally to ask students to identify various instruments and make connections. Encourage students to stand up while watching the film and to count out the beat with a tapping toe or snapping finger.

Celebrate those who take risks and express themselves. Follow with discussion of what they noticed, comments and questions. Students will use their bodies to create movements that represent sounds. Students will understand the relationship between slow movements and slow moving sound. They will develop understanding of how they can use rhythms in their bodies to represent rhythms that they hear in the music.

Part 1: Yoga

Play music CD of Duke Ellington playing *Mood Indigo*. Lead group to stand in circle, and flow through a series of yoga poses. Keep engagement high by keeping requests for new poses moderately rapid and keeping a moderate level of cardiovascular activity steady throughout the session.

Part 2: Scarf Dance

Play a song with a lively beat, perhaps *Satin Doll*, and distribute scarves for bandanas to be used by students in various individual styles. Encourage vigorous motions that get the blood going, get the group moving, and the participants smiling.



Submitted by:
Alex Johnston
Outdoor Adventure
& World Language
Essentialist
Breakwater School,
Portland, Maine

OLIVIER MESSIAEN, THE PIPE ORGAN, and TWENTIETH-CENTURY MUSIC

NAME _____

1. Music and art of the early 20th century that was meant to convey an abstract picture is called

_____.

2. Olivier Messiaen was born in _____, _____
city country

3. How do you make different colors of sound on the pipe organ?

_____.

4. A _____ is a summary of the notes used in a piece of music.

5. Often a _____ sounds happier.

6. A _____ often sounds sadder.

7. Olivier Messiaen invented his own _____.

8. The longest pipe in Kotschmar Junior is _____ long.

9. The longest pipe in many pipe organs is _____ long.

10. The longest pipe in the Kotschmar organ is _____ long.

11. The longest organ pipe in the world is _____ long and is in Sydney, Australia!

Answer Key:

1. impressionism

2. Avignon, France

3. pull out different stops, change the key, play the pedals, change amplitude

4. scale

5. major

6. minor

7. scale

8. 2 feet

9. 32 feet

10. 32 feet

11. 64 feet

OLIVIER MESSIAEN, THE PIPE ORGAN, and TWENTIETH-CENTURY MUSIC

Open Response

NAME _____

Dear Students:

Please answer the following questions about your lessons on Olivier Messiaen.

1. You were introduced to five types of musical scales during class. What do you remember about them? Please give any details.

2. Olivier Messiaen composed music that was unique and created an “impressions” for the listener. What impressions did you have of his music?

3. What part of the lessons did you enjoy the most and why?

PIPE ORGAN WORDSEARCH PUZZLE

PIPES	FLUE	MANUAL	KEYBOARD
BELLOWS	REED	CONSOLE	MIXTURE
OCTAVE	BENCH	FEET	TRUMPET
COUPLERS	HANDS	ACTION	STRING
PIPEORGAN	PISTONS	MUSIC	BACH
PUMP	SCALE	STOPS	RESERVOIR
TOESTUDS	WIND	PEDALS	FLUTE
MESSIAEN		PRINCIPAL	

Z	D	T	C	O	N	S	O	L	E	H	U	G	U	K	O	P	L	K
M	I	X	T	U	R	E	H	U	J	I	K	O	L	H	A	N	D	S
U	V	N	T	F	G	F	D	F	L	U	E	S	A	E	R	T	Y	T
S	C	A	L	E	U	Y	T	R	E	W	T	A	S	D	F	G	H	O
I	H	G	P	E	D	A	L	S	Q	P	R	B	H	Z	X	C	Z	P
C	V	H	G	T	R	T	F	R	D	E	U	S	K	E	S	A	E	S
O	L	K	I	J	O	U	F	T	R	P	M	U	P	D	M	K	I	O
P	P	R	I	N	C	I	P	A	L	Q	P	K	E	J	H	G	R	H
M	N	R	A	C	T	I	O	B	B	V	E	Y	Q	T	F	E	E	X
P	Z	X	C	V	A	B	N	M	J	K	T	P	R	O	L	U	E	Y
I	T	R	E	W	V	Q	A	S	D	F	G	H	G	Y	U	R	D	E
S	O	I	U	R	E	S	E	R	V	M	O	I	R	R	T	B	V	C
T	O	E	S	T	U	D	S	B	I	K	J	H	N	T	E	D	R	E
O	L	K	J	H	G	F	D	E	S	A	Q	W	E	R	T	Y	U	I
N	Z	X	C	V	B	N	M	L	U	P	I	P	E	O	R	G	A	N
S	T	R	I	N	G	S	X	L	E	D	W	C	R	F	V	L	T	G
B	R	H	Y	K	E	Y	B	O	A	R	D	I	P	L	M	M	K	N
B	B	H	U	Y	G	V	C	W	F	M	T	R	N	B	E	N	C	H
P	I	P	E	S	R	D	X	S	E	S	C	Z	S	D	E	B	W	A
Q	Z	M	E	S	S	I	A	E	N	O	H	N	Y	G	V	A	U	I
C	O	U	P	L	E	R	S	G	D	C	S	K	P	L	O	C	M	N
T	Y	G	H	B	N	V	C	X	Z	M	A	N	U	A	L	H	H	B

MAINE LEARNING GOALS

Maine Learning Results: ART

A1 Artist's Purpose: *PreK-2:* Students recognize a variety of purposes for making art, including communicating emotion.

B3 Making Meaning: *PreK-2:* Students create art works that communicate ideas and feelings and demonstrate skill in the use of media, tools, and techniques.

Grades 3-5: Students create art works that communicate ideas, feelings, and meanings and demonstrate skill in the use of media, tools, techniques, and processes.

Grades 6-8: Students create art works that communicate an individual point of view.

- Demonstrate skills in the use of media, tools, techniques, and processes.
- Demonstrate knowledge of visual art concepts.
- Communicate a variety of ideas, feelings, and meanings.

C1 Application of Creative Process Students identify and demonstrate creative problem-solving skills.

Pre-K-2: a. Improvise to solve problems in the performing arts. b. Imagine and share possible solutions to apply to challenges in creating art. Students describe and apply steps of creative problem solving.

Grades 3-5 a. Identify problem; b. Define problem; c. Generate a variety of solutions; d. Implement solution(s); e. Evaluate solution(s). Students describe and apply creative-thinking skills that are part of the creative problem-solving process.

Grades 6-8: a. Fluency; b. Flexibility; c. Elaboration; d. Originality; e. Analysis

E2 The Arts and Other Disciplines

PreK-2: Students identify connections between and among the arts and other disciplines.

Grades 3-5: Students describe characteristics shared between and among the arts and other disciplines.

Grades 6-8: Students explain skills and concepts that are similar across disciplines.

Maine Learning Results: MUSIC

A-3 Listening and Describing – Students listened to and described simple examples of the elements

of music including pitch, rhythm, tempo, dynamics, harmony, and texture.

D-1 Aesthetics and Criticism – Students asked questions about an art form to further understand the concepts, skills, and processes used to create the work of art.

Students explained purposes for making music in different times and places, including cultural traditions, personal expression, and communication of beliefs

Maine Learning Goals: SCIENCE

B1 Skills and Traits of Scientific Inquiry

PreK-2: Students conduct and communicate results of simple investigations.

Grades 3-5: Students plan, conduct, analyze data from and communicate results of investigations, including fair tests.

Grades 6-8: Students plan, conduct, analyze data from and communicate results of investigations, including simple experiments.

D4 Force and Motion

PreK-2: Students describe how objects move in different ways

Grades 3-5: Students summarize how various forces affect the motion of objects, the properties of waves and the wavelike property of energy.

Grades 6-8: Students describe the force of gravity, the motion of objects, the properties of waves, and the wavelike property of energy in light waves.

Maine Learning Goals: WRITING

PreK-2: 1. Use a combination of drawing, dictating, and writing to compose opinion pieces in which they tell a reader the topic or the name of the book they are writing about and state an opinion or preference about the topic

Grades 3-5: Write opinion pieces on topics or texts, supporting a point of view with reasons and information. a. Introduce a topic or text clearly, state an opinion, and create an organizational structure in which ideas are logically grouped to support the writer's purpose in which ideas are logically grouped to support the writer's purpose.

FRIENDS OF THE KOTZSCHMAR ORGAN

Founded in 1981, the Friends of the Kotschmar Organ (FOKO), a non-profit organization, supports the Kotschmar Organ. Each year the organization presents 16 to 18 concerts, engaging renowned organists and guest artists from around the world. FOKO is responsible for the care and maintenance

of the organ and provides funds to produce and promote concerts, maintain, repair, and enhance the organ, sponsor lectures and organ demonstrations and tours and supports a growing education program to bring awareness and understanding of this musical gem of Portland.

THE KOTZSCHMAR ORGAN ...

In August, 1912 the City of Portland dedicated its new City Hall, replacing the building destroyed by fire in 1908. The new building included a large public auditorium whose stage was dominated by a magnificent organ built by the Austin Organ Company of Hartford, Connecticut. The instrument was the gift of Cyrus H.K. Curtis, born in Portland in 1850, founder of the Curtis Publishing Company of Philadelphia, renowned for such magazines as *The Saturday Evening Post*, and *Ladies Home Journal*.

Curtis stipulated that his gift should be a memorial to Hermann Kotschmar, a family friend, his first music teacher, and the leading figure in Portland's musical life from the 1850s until his death in 1908.

When installed, the Kotschmar Memorial Organ was the second largest pipe organ in the world. In 1918, it was provided with a new console incorporating Austin's improved combination action. Enlarged in 1927 with a new Antiphonal Division and additions to the Swell, it was also provided with a second new console.

Although municipal organs were once common in America, only two such instruments are known to survive in regular use. (The other is the Spreckels Organ in Balboa Park, San Diego, California.)

The first Municipal Organist was Will C. Macfarlane; Edwin H. Lemare held the position from 1921 to 1923. Incumbent Ray Cornils has served since 1990.

The Kotschmar Organ celebrated its 100th Anniversary on August 22, 1912. Immediately following that evening's concert, a two-year renovation began. The entire organ has been removed from Merrill Auditorium, and every pipe

and action component restored to original condition at the shops of Foley-Baker, Incorporated, in Tolland, Connecticut. Re-installation of the instrument is currently underway.

The renovated Kotschmar Organ will make its début on Saturday evening, September 27, 2014. Performers will include Municipal Organist Ray Cornils, Peter Richard Conte (Organist of Macy's Wanamaker Organ, Philadelphia), and the Kotschmar Festival Brass.



The Kotschmar Organ, Portland, Maine