



EXPLORING MUSIC *with the* PIPE ORGAN

J.S. BACH COMES TO VISIT

An integrated teaching unit for schools



An educational project of
The Friends of the Kotzschmar Organ
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ACKNOWLEDGMENTS

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J.S. BACH COMES TO VISIT

AN INTEGRATED TEACHING UNIT Exploring Music, Dance, and Form

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EXPLORING MUSIC *with the* PIPE ORGAN

J.S. BACH COMES TO VISIT

The FRIENDS OF THE KOTZSCHMAR ORGAN (FOKO) is pleased to present this curriculum based on concepts found in middle school science of sound wave energy and its relationship to the pipe organ. It is the product of ten years of active in-classroom teaching.

FOKO's Education Committee chose the music of J.S. Bach (1685 - 1750) because he:

- is a major 17th & 18th century composer and organist;
- composed for a wide variety of instruments;
- composed in many musical forms, including: cantata, concerto, dance, fugue and toccata;
- encourages exploration of various social and historical issues, including: the role of dance in society, life in a court, and historical events of the Baroque era; and
- is a distinct contrast to the 20th century composer Olivier Messiaen, who is 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 Bach's music 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.

A complimentary curriculum, "Kotzsch-O-Rama: Integrated Arts and Science Day" is a whole-day, hands-on experience for students. It explores many facets of music, writing, movement, art, and science, and can be used in conjunction with this curriculum

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, or concerns about these materials, please contact us at info@foko.org.

NOTES FOR THE ARTIST-IN-RESIDENCE

This curriculum is the product of more than 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. 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 a vehicle to explore the music of J. S. Bach, I suggest you find out what other music of Bach or the Baroque era the students have studied or heard (in the classroom, performed in chorus or band, etc.) earlier in the year. You can then use that information to reinforce learning 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.

One of my general teaching principles is: "Do not do for students what they can do for themselves." Allow them to pull out a stop for you, pump the bellows, turn a page, or dance a minuet. When presenting a concert following classroom instruction, actively engage students in the playing. Have a student explore the highest octaves of a 2' stop, or experience the rumble of a 16' or 32' rank as they play the pedals. Have them play the low pedal D of the opening of Bach's Toccata in d minor (BWV565) at the appropriate time, while you play the manual parts.

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.

Ray Cornils
Artist-in-residence
Portland, Maine

ARTIST-IN-RESIDENCE VISIT, DAY 1

LEARNING OBJECTIVES

- * Students will become acquainted with a pipe organ and how it produces sound.
- * Students will learn about the care of a musical instrument.
- * Students will learn vocabulary and parts of a pipe organ.
- * Students will become familiar with the life and music of J.S. Bach in Germany during the 17th and 18th centuries.
- * Students will listen to various forms of music: fugue, cantata, toccata, and dance.
- * Students will ponder the question of the role of dance, life in a court, and historical events in this era.

MATERIALS LIST

- * YouTube links (Resources p.40,41)
- * Digital projector and computer with Internet connectivity to show YouTube video.
- * Music to Jesu Joy, Minuet in G, Little Fugue in g minor, Toccata in d minor; Eight Little Preludes and Fugues; Orgelbüchlein.
- * Pipe Organ (The following narrative assumes the availability of a pipe organ – either a portable 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.)
- * A few demonstration pipes (wooden ones are the safest to use and pass around).
- * A wooden pipe, sliced in half along the length of the pipe (optional p. 10).
- * Assessment (Resource p. 42).

CLASS PRESENTATION

50 minutes

As students enter playing music such as one of the *Eight Little Preludes and Fugues*, *Minuet in G*, or *Brandenburg Concerti*.

Introducing J.S. Bach and the Pipe Organ

Introduce yourself

Profession: musician

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

Welcome: Really great to be a visitor in your school.

Introduce proper care of the instrument

When I go to work I have to put on special shoes. (*Change into organ shoes.*) Why do you think that is? You can ask a friend to give you a hint? Think of what you have to do to play the organ? (*Ask for more clues.*) These shoes are made especially to play the organ. I've been walking in the dirt so I wouldn't want to play the organ with dirty feet. This helps to take care of the craftsmanship of the instrument.

You may play the portable organ with a teacher but with care. You may want to play with your stocking feet.

Please, only one person playing at a time
Please do not handle the pipes.

This instrument is a work of art, made by several craftsmen and women. It will last centuries if given the proper care.

Explore how a pipe organ works

How is the sound made?

What produces the sound? (*Air, pipe, the holes in the pipes, the manuals, the lungs.*)

(*Show a demonstration pipe to the students.*)

How do you get this pipe to work?

Do I strum it?

Shake it?

How does air go through it?

Do you blow into it? (*Blow across mouth*). Did that work?

Try blowing into the other end. Blow into pipe. (toe) That worked!

Explore when J. S. Bach lived

The pipe organ has been around a very long time. One of the great composers for the organ was J. S. Bach. He lived before me, before your grandparents.

(Write the following years on the board)

2015

1915

1815

1715

1615

1515

1415

What years do you think Bach lived? During which year written on the board was Bach alive?

(Have the students vote for the year in which Bach was living.)

1915- Alexander Graham Bell made first trans-continental phone call - New York to San Francisco.

1815 – Maine had not become a state (It became a state in 1820).

1715 – George Washington had not been born yet (He was born in 1732).

1615 - The Mayflower had not landed at Plymouth Rock yet (This happened in 1620).

1515 – Columbus had just discovered the “New World” in 1492.

1415 – The printing press had not been invented yet (This happened around 1439).

Bach lived from 1685 to 1750 and was alive in 1715, 300 years ago.

Now, the pipe organ existed long before Bach lived.

In fact, the oldest organ that is still playing is from about 1430 (nearly 600 years ago).

It is in Sion, Switzerland. (If students wish to hear this instrument, go to this YouTube link: <https://www.youtube.com/watch?v=R6ble31amDA>)

Now if you think that was long ago, the Greek inventor Ctesibius developed the hydraulis, the earliest organ, over 2300 years ago.

Explore a bit of Bach’s family and training. J.S. Bach’s father played the trumpet. His grandfather and uncles played the organ. Just as a baker may hand down the baking trade to the next generation, so the Bach family was a family of musicians who passed on their training from one generation to another.

Johann’s first teachers were his older relatives. He kept that tradition alive by passing his musical training to many of his 20 children, four of whom became fine composers and musicians. Only 14 lived to be adults. (Resources p. 37, 48.)

Explore the Wind System of the Organ

Now, you need air to make a pipe play.

The pipe organ could be described as a wind instrument.

You have to blow wind into a pipe to make it sound.

Where does the wind come from to make the pipes play?

(Often students will answer, “turn the organ on” or “plug it in”, etc.)

When was electricity discovered and harnessed?
- late 1800’s.

Were there organs before the time of electricity? Of course, we have already said that Bach lived before electricity was discovered.

In Bach’s time students had to manually pump the organ. How did they do this?

Note that the instrument in your classroom, Kotzschmar Junior, can be played without plugging it into an electrical outlet.

(Have the students discover the pump handle.)

Choose a student to pump the organ.

How am I going to get wind into the organ?

(Give instructions on pumping: Stand up and face the classroom, use your right hand to pull up on the bellows handle.)

What do you see?
The lungs are expanding.
Where is the air going from the bellows?
It is filling up what is called the reservoir, a place to store the air. *(May make comparison to a water reservoir in a town so everyone has access to water at the same time if needed.)*

Once you have it filled do you need to keep pumping? No.
How many times do you have to pump to fill up the reservoir?
Stop pumping bellows when the reservoir is full – the pumper must keep their eye on the reservoir as they pump. You don't have to frantically pump it.

*(Have a student pump the bellows and stop when the reservoir is full.
Then play a piece on the organ until the reservoir is empty).*

Exploration of Manuals, Pedals, and Stops

Ask another student to help you. *(During the commotion and while the students are distracted, push in all the stops.)*
Before the student starts pumping the bellows, ask the student, "So, what does an organist have to push down when they sit at the organ to play a piece?"
"Push down the keys."

"Right! Now, let's explore the keyboards of an organ."
(Play opening of Bach's Little Fugue in g minor. Play fugue subject with right hand, then left hand, then feet alone.)

"The keyboards that organists play with their hands are called manuals."
What other words that refer to hands have the same root (*man*)?
Manicure, manual labor, Mano a mano."

"The keyboard played by an organist's feet is called a pedal board.
What are other "*ped*" words?"
Pedicure, pedestrian, pedal your bike."

Ask the student to press a key on either the manual or pedals.
(No sound!)
"Why didn't the organ make any sound?"
"Because there was no air in the bellows."
(Have the student fill the reservoir with air by pumping the bellows.)

(You push down keys.)
"Still no sound! Why not? Something must be wrong!"

(Lead the student to discover the stop knobs and have them pull one out.)
Now try to play one more time, with air and stops pulled out. "SUCCESS!"
(Relate that the term "pulling out all the stops" is really an organ term.)

(Have the student pump and play the opening pages of the BWV 565, Toccata in d minor, changing the stops between the various sections of the piece.)
Let me play a piece by J.S. Bach. It is Toccata in d minor. *(Change stops for different sounds, then combinations of 2 or 3 stops).*

Exploration of various stops and stop combinations

What happens if I pull out all the stops? I'll be using more pipes so I'll need more air. Now I'll play the piece with all the stops. What did you notice about the bellows and reservoir? It used a lot more air than when you play using only one stop. It was also louder the more stops you used.

You can explore the different sounds of each stop with the class.

The cylindrical, metal pipes make the principal sounds.

The rectangular wooden pipes, etc., make the flute sounds.

Have the student choose the stops and play the same fragment of the piece on the sounds chosen by the student.

Why would I use different stops?

(Possible responses: Because the room is big and needs more sound to fill it. The same sound all the time might get boring to listen to, smaller variations in sounds, different types of pipes to make different sounds).

Exploration of Pipe Length and Pitch

(Show the students two wooden pipes from the same rank of different lengths. Call the longer pipe Pipe #1, and the other Pipe #2).

"Will these two pipes produce the same sound?"
"No"

"What do you think would be the difference?"
(various answers from the students).

"Let's hear what the difference is. Close your eyes and I will blow into each pipe." *(Blow into each pipe.)*

"Now I will play blow into only 1 pipe." *(blow into one of the pipes)*

"Still with your eyes closed, raise your hand if you think I was playing *Pipe #1*."

"Raise your hand if you think I was playing *Pipe #2*."

"Now, open your eyes" and show them which pipe you just were using.

"Notice that the length of a pipe determines the pitch."

(Hint, Write LL and SH on the board)

LL = Long pipe makes Lower pitch;

SH = Short pipe makes High pitch.

Note correlations to band or orchestral instruments. A trombone (longer instrument) makes lower pitches than a clarinet (a shorter instrument). A clarinet (shorter instrument) makes lower pitches than a piccolo (very short instrument).

Continue this exploration using two metal pipes from the same rank of different lengths.

"Which pipe is longer?"

"Which pipe will make a higher pitch?"

The longest pipe in Kotschmar Junior is two feet long. The longest pipe in many organs (including the organ at First Parish Church, where you visit in a couple of weeks) is 16 feet long!

And the longest pipe in the Kotschmar Organ is 32 feet long! The longest organ pipe in the world is 64 feet long! (Sydney Town Hall, Sydney Australia). That would be a VERY LOW pitch!

OPTIONAL:

PARTS OF A FLUE PIPE

(Show a cutaway of a wooden pipe and compare it to a wooden pipe.) How do they compare? They have a mouth like a flute instrument, a toe, head, and body. Let's trace how the air enters the pipe and then sounds the note.



1. Air enters through the **toe** hole into
2. The **foot** of the pipe.
3. Air enters the lower chamber of the pipe where it is formed into a “sheet” of air when it goes through the slit.
4. **Flue** of the pipe at the
5. **Lower lip** of the pipe.
6. That sheet of air perfectly hits **upper lip** of the pipe
7. The **upper lip** disrupts that sheet of air, causing the air in the **body** of the pipe to vibrate.

Assessment:

What Have I Learned About the Pipe Organ?

(Resources: p. 42)

Play: *Jesu, Joy* while working on the worksheet.



ARTIST-IN-RESIDENCE VISIT, DAY 2

LEARNING OBJECTIVES

- * Students will become familiar with Bach's use of composition elements.
- * Students will listen and explore how music creates form and function.
- * Students will learn social and cultural aspects of 18th century life.

SYNOPSIS

- * Explore the relationship of fugue, cantata, and toccata.
- * Explore how organ pipes produce various sounds.
- * Explore historical aspects of the 17th & 18th centuries.

MATERIALS

Important Words – *put on blackboard*

Manual
Pedal
Duke
Court
Cantata
Minuet
Fugue
Toccat

8.5 x 11 signs with names of German cities

Eisenach
Lüneburg
Arnstadt
Lübeck
Weimar
Köthen
Mühlhausen
Leipzig

(Place these signs under students' seats before they arrive, or have a classroom helper hand these signs to students as they enter the classroom.)

Assessment Sheet – Johann Sebastian Bach Comes to Visit (Resources p. 43)

Map of Germany with cities p.44

Photos to go with cities pp. 46, 49, 50, 52

Pencils.

White curled wig, lace wrist cuffs, and jabot.

Music, including

Jesu, Joy

Minuet in G

Little Fugue in g minor

Toccat in d minor

YouTube links with the lesson

REVIEW FROM DAY ONE

Note: At your discretion, this review can be incorporated into your presentation below.

Use this time to ask questions such as

“What do you know about a pipe organ?”

“What do you know about J.S. Bach?”

(or other questions that relate to what you did on your first visit in the classroom. This will allow them to review their knowledge and give you a basis on which to continue your teaching with the class during this next hour. This review can be brief, only a few minutes.)

VISIT DAY TWO

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

Come to the classroom in costume. (white curled wig, lace cuffs, and jabot).

Play *Jesu, Joy* on organ or CD as students enter the classroom.

My Life

(spoken in your finest German accent)

Guten Morgen! *(Good morning!)*

Meine Name ist J. S. Bach! *(My name is J.S. Bach.)*

Wie ist deine Name? *(What is your name?)*

(Ask this of several students. They will be puzzled at first and probably won't answer with their name. Simply go to another student and repeat the process (gesture toward yourself as you say Meine Name and gesture to the student as you say deine Name. Eventually they will figure it out and reply with their name. You can reply.)

Sehr gut! *(Very good.)*

Why am I speaking German?

Bach was born in Germany.

Did you know that the word Bach means, "brook"?

And that Johann is the German equivalent of John?

Therefore, in English, you could call me Mr. John Brook.

Let's listen to some of Bach's music.

Play Brandenburg Concerto #1

[http://www.youtube.com/watch?](http://www.youtube.com/watch?v=Zpf38dQpMzk)

[v=Zpf38dQpMzk](http://www.youtube.com/watch?v=Zpf38dQpMzk)

What instruments did you hear playing?

(They may answer with French horn, clarinet, violin, harpsichord, piano, oboe, bassoon, etc.).

If they reply with instruments that aren't in the video, you might reply:

"Bach never played the piano because it wasn't invented yet.

He was born in 1685, died in 1750. The piano was invented in 1700, but was not commonly used until after Bach's death."

PLACE BACH'S LIFE IN CONTEXT OF HISTORY

(May repeat from lesson one or teach for the first time here or skip.)

What year is this year?

(Write 2017 on the board)

What year was it 100 years ago?

(Write 1917 on the board under 2017)

What year 200 years ago? Etc.

(Write 18157

1717

1617

1517

1417 on the board)

In which of these years was Bach alive?

(1717)

How many years ago was that?

(300)

When did the United States become a country?

(1776 - after Bach lived)

(Replay Brandenburg Concerto – point out instruments.) These are all instruments he would have known. p.47

PLACE BACH'S LIFE IN CONTEXT OF HIS FAMILY

Bach's father played the trumpet. He was the town trumpeter!

His grandfather, uncles, and brother all played the organ. All of the family was musical, teaching and handing down the musical knowledge and heritage to the next generations. Bach was the eighth child of his family.

Why did they have so many children in those days? Several of Bach's own children died before they became adults.

Health care was a problem. His first wife died and he remarried and had more children with the second wife. He had 20 children with two wives.

(Family tree diagram pp.37, 48)

PLACE BACH'S LIFE EVENTS AND MUSIC IN CONTEXT OF WHERE HE LIVED

“Who has the **Eisenach** sign?”

(Student stands, holding sign.)

Bach says, “This is the town where I was born. I was the eighth child in my family. My oldest brother was 14 when I was born. When I was 9, my mother died, and 8 months later, my father died. What do you think I did? *(Let students answer)*. Some music I copied-even though I was forbidden to do this. How did I copy this? *(not with a copier, but by hand)*. *(Resources p.53)*

“Who has the **Lüneburg** sign?”

At the age of 14, I was awarded a scholarship to go to school in this town. I got this scholarship because I had a good singing voice.

“Who has the **Arnstadt** sign?”

At the age of 18, I was appointed organist at St. Boniface's Church in Arnstadt. *(Resources p.52)*

“Who has the **Lübeck** sign?”

At the age of 20 I travelled here (on foot – 280 miles each way) to learn from the famous Dietrich Buxtehude, and stayed there 3 months. I stayed there longer than I had planned and was months late returning to my job in Arnstadt! My boss was not happy.

“Who has the **Mühlhausen** sign?”

At the age of 21, I became organist here with a better salary and a better choir. I married Maria Barbara Bach, my second cousin. We had seven children; four survived to be adults.

“Who has the **Weimar** sign?”

Two years later I became the Director of Music at the court of Weimar.

(Show photos

**Palace at Weimar Chapel at Weimar (Where is the organ? Resources p. 46)*

Bach lived in a court. There was a palace where a duke was in charge.

What kind of courts do you know? What does the word court mean? *(Students may answer: judge, People's Court, courtyard, basketball court, large area, food court, some place where important things happen, tennis court, court jester – the duke would hire someone for entertainment of games, hire a court musician to provide the music.)*

What town do you live in?

Who is in charge of the city?

(Mayor or town manager)

“Who is in charge of your state?”

(Governor)

Bach worked for the town manager who lived in a court, a duke.

Why would a duke hire Bach?

(Enjoyment, entertainment, dancing).

Play Minuet in G on K junior, listen to it on YouTube on the harpsichord. <http://www.youtube.com/watch?v=KqSAGwa49MM>

(Dance to it with YouTube or singing.)

Find a partner!

You can dance to Bach!!!

It was in Weimar that Bach wrote many keyboard and instrumental works.

It was in Weimar that Bach was jailed for wanting to leave his job.

“Who has **Köthen**?”

It was here that I wrote a lot of dance music (Allemande, Courante, Saraband, Gigue).

My wife died suddenly in 1720.

The next year I married a fine soprano, Anna Magdalena. We had 13 more children; seven survived into adulthood.

“Who has **Leipzig**?”

In 1723 I became the Kantor for the city of Leipzig. I was in charge of the music for four churches, including St. Thomas. There was a university in this city. It also had a very fine coffee house. The Starbucks of the 18th century! Coffee was one of my favorite drinks. *(Resource p.49, 50)*

“What else do you think they ate then?”
(*Salad, vegetables, meat, potatoes, hot dogs, bread, thick crispy sausages, pastries – They drank beer – since health care was not good, water was not always good, they would take hops from their crops.*)

Part of Bach’s job in Leipzig was to compose, rehearse and perform a cantata every Sunday. He wrote hundreds of cantatas, many of which have been lost. We know of a few more than 300 that have survived.

(Introduce **Cantata** - write on the board)

Cantata is an Italian word meaning “to sing” involving a choir and instruments.

*Cantare means to sing in Latin,
Cantar means to sing in Spanish.*

(Show picture of Bach’s manuscript and handwriting. Resource p.53)

Here is a portion of one of his most beloved cantatas.

Let’s listen to this in three different ways.

1. Jesu Joy – German choir.

Can you understand this choir? They are singing in German. <http://www.youtube.com/watch?v=3Mn1ibFdXDU>

2. Children’s choir singing in English. Are they using a harpsichord? No, a piano. <http://www.youtube.com/watch?v=NAu-tmhU7Rk>

3. Celtic women in concert. <http://www.youtube.com/watch?v=iPeVIuRjUi4>

“Which version did you like best? Close your eyes and raise your hands to tell me which one you like best.”

“Wow, each version got some votes! It is interesting that version spoke to you.”

“Bach’s music can be heard in many ways, in concert, in a church, on a stage, or in a school.”

“Let’s listen to another type of composition that Bach wrote, a fugue.”
(Write **fugue** on the board)

Fugue – “What is a fugue?”

- * It is a piece of music which has a main melody called a subject.
- * The subject reoccurs many times throughout the piece and is blended together with the rest of the piece.
- * Often people call this counterpoint that is like a conversation between three or four people.
- * Bach was an expert in counterpoint.

Play: *Little Fugue in g minor*

Play the subject – theme that is repeated several times.

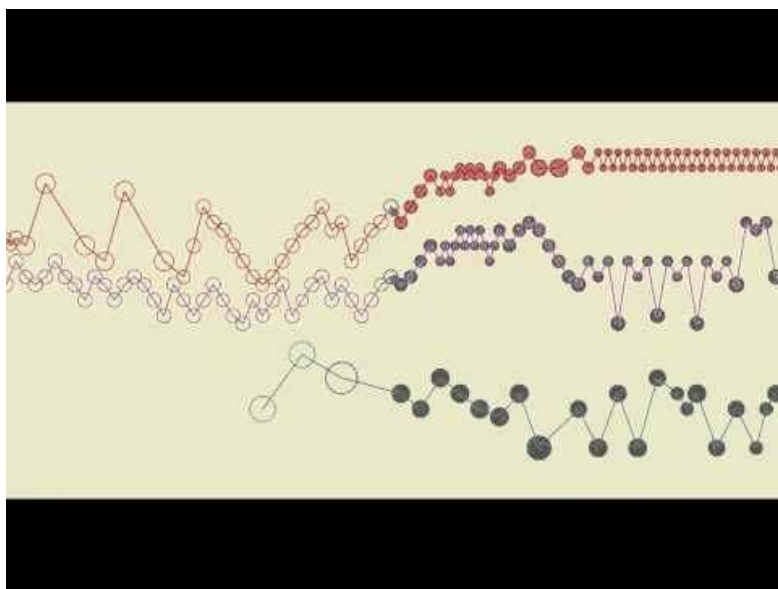
Sing it with the words “J. S Bach composed this little melody” fugue words. (See Resources p.38, 51)).

(YouTube search: “Little” Fugue in G Minor BWV 578 free mp3”)

(Point out with a laser pointer, the entrances of the fugue subject.)

“How many times did the fugue subject appear?” (9)

(Explore the student’s reactions with the video.)



(Introduce **Minuet** - write the word on the board.)

As I mentioned before, Bach wrote a lot of dance music. There were several popular dances at that time. One of those dances was a minuet. Let's listen to one of Bach's minuets.

(Harpsichord video Minuet in G, or play it on the organ in the classroom.)

<http://www.youtube.com/watch?v=71x4MSlpGUk>

"Why would Bach write music to dance to?" (For entertainment or a grand "ball," or something to do after dinner at the court. View video of dancing to music.)

<https://www.youtube.com/watch?v=iiGgip6q0n4>

(If you wish to have some fun, find a student to dance with while singing the Minuet in G melody.)

(Introduce **Toccata** - write the word on the board)

Another type of music that Bach wrote was called a **toccata**- a piece of music to show the player's skills, it is usually very fast and fun. The word comes from the Italian toccare and means, "to touch" - like touching the keys.

(Listen to YouTube clip of Toccata in d minor - note pedal solo at end.)

<http://www.youtube.com/watch?v=CTVraVgzC9U>

(Introduce **Harpsichord** - write word on the board.)

http://www.youtube.com/watch?v=yIZIzdKT_Fg

(Music of Addams Family.)

Even though you think the harpsichord is old, it is still used today in concerts.

(Destructive video - just for fun.)

<http://www.youtube.com/watch?v=jaSfOx43ykQ>

Yes, this has special effects, it did not really happen. But, what were they trying to demonstrate? The piece used such low notes and so much air, that the walls vibrated and crashed. Remember, sound is about vibrations. Some of the low pedal

notes have such low and strong vibrations, that they acted like the vibrations of an earthquake.

CLOSING ACTIVITIES

The Magic Wig

"What Would Bach Say?"/"What Would Mrs. Bach Say?"

(Take off the Bach wig. Ask, "Who wants to wear Bach's wig?" Put it on a student's head, and ask the student to say something that Johann Sebastian Bach or Mrs. Bach would say.)



Classroom Assessment:

Assessment: Bach Comes to Visit (Resource p.43)

MEET THE KING OF INSTRUMENTS

The Kotschmar Organ

Upon completion of the artist-in-residence visits on the sounds of the pipe organ and Bach's music, the students attend a concert at Merrill Auditorium in Portland, Maine with the mighty Kotschmar Organ. Ray Cornils, the Municipal Organist for the City of Portland, revisits the concepts taught in the classroom.

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 prohibits 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 Kotschmar 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. (p.34)

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?"



Up the stairs to the windchest



In the winchest



Looking at the reservoir

A SAMPLE PROGRAM

A FIELD TRIP TO A LOCAL PIPE ORGAN

Ray Cornils, organist

Frederick German
Trumpet Tune

Jean-François Dandrieu
The Fifers

Johann Sebastian Bach
Jesu, Joy of Man's Desiring
Little FUGUE in g minor
TOCCATA in d minor
Minuet in G Major

Noel Rawsthorne
Dancing Feet

Percy Fletcher
Fountain Reverie

John Williams
Hedwig's Theme

Hermann Kotzschmar
The Leviathan March

Charles Marie Widor
TOCCATA from Symphonie V

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!



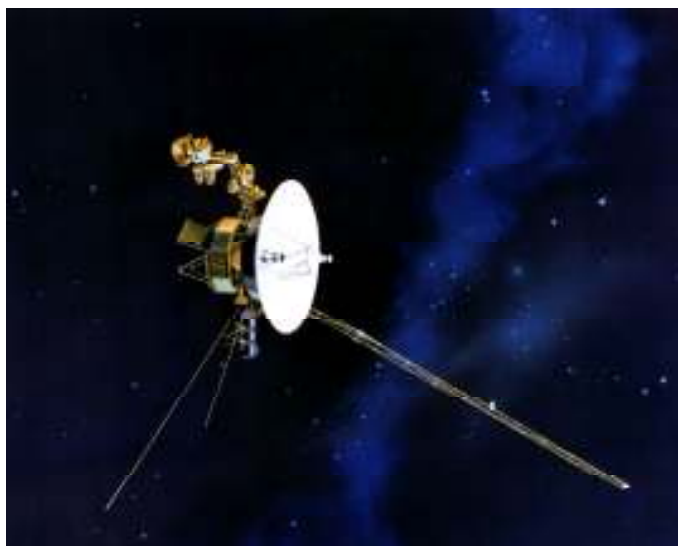
PRE-VISIT ACTIVITIES

ACTIVITY:

Bach - Aboard the 1977 Voyager Spacecraft

Lesson Objectives

- * Students will think critically as they consider the purpose and contents of the Golden Record aboard the 1977 Voyager spacecraft.
- * Students will respond through discussion and writing prompts to questions related to J.S. Bach and the Golden Record.
- * Students will think creatively as they contemplate the contents and design of their own Golden Record - planned to define himself or herself or a group they belong to.



Useful Sources

Website

<http://voyager.jpl.nasa.gov/spacecraft/goldenrec.html>

Book Murmurs of Earth (1978, 1992) now out of print

Step One. Discuss the possibility of life beyond planet Earth. Ask students to consider what they would want to know about other life forms - and what those life forms might want to know about us.

Step Two. Have students visit the site below to learn more about the Golden Record that was included on the 1977 Voyager spacecraft. Click on “Music from Earth” on the right-hand side of the screen to see the pieces of music that were included on the Golden Record.

<http://voyager.jpl.nasa.gov/spacecraft/goldenrec.html>

Step Three. Ask students to discuss (or write in response) to one or more of the following questions.

- * Which Bach pieces are included on the Golden Record?
- * Listen to at least one of the pieces and tell why you think it was included?
- * Do you recognize any other pieces included on the Golden Record?
- * If it were your job to select musical selections to include, what would you add? Explain why.
- * What is your reaction to the other things that are included on the Golden Record? Are they things you would include? Are there other things you might include?

Step Four. Individual students will create a “Golden Record” to define/explain one of the following and will share with others.

(Self, their family, their classroom and classmates, the United States of America, the state of Maine, Girl Scouts/Boy Scouts, or any other interesting concept).

ACTIVITY: What's in a Name? Embedded Acrostic Poem

Objective: Students will create an embedded acrostic poem including information they have learned about the composer, Johann Sebastian Bach.

Materials: Pencil, lined paper, poem template with the name 'Johann Sebastian Bach' down the center of the paper (template p.36), multi-colored construction paper, glue / tape.

Activity: As a class review, students will work with a partner to write three interesting facts they have learned about Bach using as many details as possible (dates, vocabulary words, compositions, etc.) from their lessons.

Each group will share one fact (that another group has not already shared) and students will be asked to identify any keywords to add to a "word-bank" that the teacher will write on the board as facts are shared. Students can refer to this word-bank during the writing process.

Students will then write their own embedded acrostic poem (where the letter in Bach's name can appear anywhere in the phrase on that line). If this style of poetry is new to students, a sample poem can be created as a class, using the name of the teacher, a student in class, etc., to familiarize students with the format.

A final draft of the poem can be completed on a new template (or student created version with Bach's name embellished with colors/bold font/etc.) and mounted on colored construction paper. Display the poems in the hallway.

This embedded acrostic poem can be used as an in-class activity or as an assessment.

The poem can be done as a whole class, partner, or individual activity, and can be adapted for younger students by just using the word BACH.

My oldest brother was **J**ohann Christoph.
I walked tw**O** hundred miles for a job.
He studied the **H**arpsichord
He pl**A**yed for a duke.
I was bor**N** in Eisenach in Germany.
I wrote ca**N**tatas and toccatas.

Bach means **B**rook.
We d**A**nced the minuet.
I loved **C**offee and wrote songs about it.
Twenty **c**Hildren!

ACTIVITY: Life of Johann Sebastian Bach Class Mural Activity

Lesson Objectives

- * Students will work as a class to create a timeline of J.S. Bach's life, breaking it down into sections that will become a wall mural.
- * Students will work in small groups, with mixed media, to create individual sections of a mural detailing the life of J.S. Bach.

Useful Sources

<http://www.baroquemusic.org/bqxjsbach.html>

Lives of the Musicians Good Times, Bad Times Kathleen Krull (1993)

Supplies Age-appropriate biography of J.S. Bach

Mural supplies - paper, crayons, tempera paints, markers, collage materials, glue

Collaborative Class Mural

Following a reading of a biography of J.S. Bach, the class will work together to create a timeline of Bach's life, (including key events, dates, places) breaking it down into sections that will become a wall mural.

2. After creating the timeline, students will collaborate in small groups to plan and execute individual sections of the mural. Tell students that their mural will become a teaching tool to help others learn about Bach. Each section should include basic text, date, key words, and place.

Possible timeline, locations, dates for mural segments. May be modified as needed.

EISENACH:	1685-1695
OHRDRUF:	1695-1700
LÜNEBURG:	1700-1702
WEIMAR:	1703
ARNSTADT:	1703-1707
MÜHLHAUSEN:	1707-1708
WEIMAR:	1708-1717
CÖTHEN:	1717-1723
LEIPZIG:	1723-1750

Once all sections are complete, display the mural in chronological order in the hallway.

4. Tell the class that they are going to help create a worksheet for another grade level to use as they study the Bach mural. Each group should submit one or two questions that can be answered by studying their section of the mural on display.

5. The teacher should compile all the questions on one sheet and distribute to the class. Allow time for everyone to study the mural and complete the worksheet. The teacher should consider the appropriateness of all questions and if answers are clear. Allow students to discuss and edit questions as needed.

ACTIVITY: Life of Johann Sebastian Bach Class Mural Activity (continued)

6. Copy final question worksheet and distribute to another grade level(s).

Other

If possible, allow the student artists to guide others through the mural and present the assignment to small groups.

* Photograph each section of the mural. Ask individual groups to compose a paragraph about their section. Create a class book. Compile photos and paragraphs in sequential order, add a cover and bind. Copies can be given to other classrooms, placed in the school library, shared with school board members and administration, or kept by individual students.

ACTIVITY: Bach-Related Writing Prompts

The following prompts may be used as:

- * a daily journal prompt
- * choices for students to select the one they wish to write about
- * content area integrated assignments (ELA, Social Studies)

These prompt ideas are taken from the Musical Notes on page 17 of **Lives of the Musicians Good Times, Bad Times** by Kathleen Krull.

Bach wrote his famous Two-Part Inventions as exercises for his children to help them exercise each finger and train their hands to play independently.

Think about the different ways your parents help you “exercise” your mind. Share something your parents ask you to do over and over again (like Bach asking his children to play the Two-Part Inventions) that will train you and help you when you are older.

How about your teachers? What kinds of “mental exercise” do they ask you to do? And no this is not about gym class and jumping jacks!

Marianne Ziegler was a woman poet who worked with Bach and provided the words for several of his pieces. At this time in history, women did not play significant roles in creating or performing music.

Why do you think Bach chose to work with Marianne Ziegler?

How do you think Marianne Ziegler felt to have the opportunity to work with Bach?

Bach wrote the Goldberg Variations to relax a millionaire.

Listen to the Goldberg Variations. Explain why this music could help someone relax. What situations help you relax? Does everyone find the same things to be relaxing?

ACTIVITY: Bach's Family Tree

Using Johann Sebastian Bach's family tree printed on the back of these questions, can you find the following information? (pp. 37, 48)

1. In what YEAR was Johann Sebastian Bach born?
2. What CITY was Johann's father born in?
3. HOW OLD was Johann's mother when she died?
4. HOW OLD was Johann when his first daughter was born?
5. What were the OCCUPATIONS of some of Bach's grandchildren?
6. Now write a question of your own! Make sure your classmates can figure out the answer using J.S. Bach's family tree.

ACTIVITY: J.S. Bach - Perspective & Poetry Activity

Lesson Objectives

Students will combine knowledge gained about J.S. Bach with their own creativity to write poems from the perspective of various individuals or entities connected to J.S. Bach. Each poem will illuminate the essence of the individual/entity and his/her feelings, providing a succinct yet vivid depiction of a single perspective.

Useful Text

Poetry Every Where by J. Collom, S. Noethe (examples of poetry forms & styles for all ages)

Step One - Begin by reviewing perspective/point of view.

Step Two - Ask students to work as a class to brainstorm a list of all the people and entities (things) that are a part of their school day. (school bus, backpack, librarian, cooks, eraser, chair, secretary, pencil, door)

Go through the list asking students to imagine they are one of the words on the brainstorm list and to speak about their day - as if they were that word. This can be done in pairs or as a whole class. The teacher should model first showing how to include wants and needs, fears, joys and sorrows of the chosen word. Be creative!

Step Three - Ask students to think about J.S. Bach and all the knowledge they have about his life and times. Once again, ask students to brainstorm a list of related individuals/entities.

Step Four - Each student will select one word from the list and write a poem from this perspective. Possible forms/styles include: 1) dialogue poem - poem for 2 voices, 2) embedded acrostic, 3) "I Remember" poem, 4) ballad, 5) free verse, 6) portrait poem, 7) picture inspired.

Step Five - Edit poems, make final copies, illustrate or decorate.

Step Six - Bind final copies in chapbook form with Japanese stab binding (or other binding method).

Step Seven - Students will share their poems at a poetry reading. After everyone has shared, discuss how this idea of seeing from another's perspective can help us in our daily lives such as family members, friends, at home or at school.

ALTERNATE ACTIVITY

Instead of poetry, students could write a first-person paragraph from the perspective of the chosen word.

You've learned a lot about J.S Bach's life and music! Now write an embedded acrostic poem including things you know about this famous composer.

_____	I	_____
_____	A	_____
_____	M	_____
_____	B	_____
_____	A	_____
_____	C	_____
_____	H	_____

Written by: _____

ACTIVITY: Music Listening Activities

Objective: Students will identify musical components of various J.S. Bach pieces through critical listening in a variety of active listening games.

Materials: Recordings of a variety of Bach's compositions

Music vocabulary words on cards: (see examples below)

TEMPO: Largo, Andante, Allegro, Presto

ENSEMBLE: Solo, Duet, Orchestra, Choir

COMPOSITION: Fugue, Concerto, Cantata, Toccata

Activity: Four Corners

While a selection of Bach's music is playing, pass out four vocabulary cards to four students and ask them to stand in the corners of the room. These students hold up their cards while the rest of the class listens to the musical selection for a determined amount of time (e.g. - 30 seconds, 60 seconds) then walk to the corner of the room that they believe is the correct answer. After all students have selected an answer, ask one student in each corner to justify their answer.

Repeat activity with new cards and students. Musical selections may be changed or the same one can be used to gather further details about the composition thru the listening game.

ACTIVITY: Music Listening Activities (continued)

Elimination: Post three or more vocabulary cards on the board. Tell students you have chosen words that both DO and DON'T describe the music.

As students listen to the musical example, ask volunteers one at a time to come up to the board and eliminate incorrect answers.

To challenge older students, use more vocabulary word cards and/or have them to do a word sort before the elimination begins.

ACTIVITY: A Musical Family - J. S. Bach's Family Tree

Objective: Students will become familiar with J.S. Bach's family tree and create a family tree of their own.

Materials: Bach's Family Tree Worksheet

<http://www.classichistory.net/archives/bach-family-tree>

Blank Family Tree Template

<http://www.familytreetemplates.net/category/kids>

Activity: Warm-up for activity by asking students to recall what they have learned about J.S. Bach's family. (He came from a very musical family, was orphaned at the age of 10, raised by an older brother, etc.)

Hand out copies of Bach's family tree (see resources), or project for the class to see. As a class, discuss the format of a family tree.

Pose questions to students: What kinds of information can be included in a family tree? What can you figure out by using this information?

Using the Bach Family Tree, students will work with a partner to answer questions on the accompanying worksheet. As a class, compare answers and have each group pose their created question to the class.

Handout 'My Family Tree' templates to each student, and ask them to fill in as much as they are able. Students should take home the tree to complete with a family member, which should spur on some interesting discussions!

There are many different versions of 'fill-in-the-blank' templates available to download on this site. Choose one that works for your students.

SEE ALSO

Bach's Big Adventure Unit Study

Bach's Big Adventure Unit and Printables Author: Sallie Ketcham Illustrator: Timothy Bush ISBN: 0531301400. Level 3 unit by Molly Boulter
www.homeschoolshare.com/bach_big_adventure.php

Written by Hannah S. from Hartford-Sumner Elementary School after the school visit to hear the Kotzschmar Organ at Merrill Auditorium, Portland, Maine.

About 1400 Pipes in the ceiling
We learned Interesting facts about organs
Powerful pipes
Entertaining music

Organ
Ray was awesome
OrGans are cool.
An awesome organ player
Nothing was bad about the trip.



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 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 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 four to six 20 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 led through a variety of experiences.

Based upon this experience with Messiaen’s music, FOKO has created a BACH Kotzsch-o-rama day in a similar format. For an immersion in Bach’s music and various modes of artistic expression, several stations were presented to support a hands-on experiential day for all ages of students. Music was blended throughout all the activities.

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.

Our bodies seem to naturally move to music. The movement experience takes students through a variety of dance experiences prominent during Bach’s era.

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 Bach and their response to his music, with fantastic results!

Enjoy the day!



Kotzsch-O-Rama: Exploring Dance

LEARNING OBJECTIVE

Students will participate in learning dance steps to a minuet.

SET-UP

Use a large space like a gym or cafeteria. Place a circle (rubber mats similar to what are used in a microwave) for students on the floor as a home base.

MATERIALS

Projector, music, screen, circle mats

ACTIVITY

Baroque music is inspired by dance. When you hear the music of Bach, imagine that you could be dancing to this music.

Bach's music notes subtle changes in the energy of the dancing, interaction of sound, emotion, and motion.

Bring in aspects of social studies and history of the 17th and 18th century. Students can observe clothing and manner of interacting with others during these centuries.

View the following sections:

Baroque dancing – ladies in baroque dress
<https://www.youtube.com/watch?v=iiGgip6q0n4>

How to Dance Through Time: The Elegance of Baroque
<http://www.youtube.com/watch?v=9wIU4PP1eUI>

Various forms including the allemande are demonstrated in traditional costume of the Baroque era.
Use the 3:08 minute mark.

G. F. Handel – Water Music – group minuet dancing
<http://www.youtube.com/watch?v=epmG43H9D98>



Dance Instructions

Each student stood on one of the circles so they would know where to return to as their base point.

Since holding hands was not something that was always done during this time period, the students held their palms towards each other without touching.

With music playing they bowed forward for the “dance” and then bowed to their partner. Each pair took four steps forward and then four steps backwards to their base circle.

One partner turned 180 degrees and they then did a slow circle with palms almost touching. Next the other two groups joined the middle group and all did a slow circle.

The male in the first pair went diagonally to the female in the second group and did a circle with her and then diagonally to the third female and repeated a circle.

The pairs did four steps forward and four steps backwards to end the dance.

Lots of giggling but they enjoyed it once they got into the spirit of the dance!

KOTZSCH-O-RAMA

MUSIC, EMOTION, AND VISUAL ARTS

LEARNING OBJECTIVES

Students will relate visual elements to musical elements using color and layers of media.

MATERIALS

BACH card 11 x 17

Watercolor paints

Brushes

Containers of water

(crayons or markers may also be used)

Music on CD player

Pencil

B.A.C.H Art activity

Introduce yourself – art teacher, organist

A few weeks ago, Mr. Cornils talked to you about the pipe organ and Herr Bach. Who remembers some of the facts about J.S. Bach's life?

How many children did he have? (20)

How many wives? (2)

What was his favorite beverage? (*Coffee*)

How far did he walk to get to the Duke's house? (*200 miles*)

Anything else?

Today we are going to listen to some of Bach's compositions and explore our feelings about the music as we express it in creating a visual representation of those feelings.

- When music is loud, almost hurting your ears, what color might you think of? (Red, purple)
- If the music is heavy sounding, how might you represent it? (A thick line)
- If it is bright and sparkly what color (s) and representations (zigzag, stars, dots, yellow, green) might you draw?
- If the music moved quickly would it be a long straight line or squiggles or asterisks, or lots of dots?

So today we are not drawing pictures of objects but representing the music through colors and graphics like lines of all sizes and structures, stars, and fireworks.

Let's look at our BACH sheet. The first rectangle on the left has a new word on the top of the page. A badinerie is a name for a dance. Remember in Bach's time there was no TV or computers, so families entertained themselves with dance that involved special steps and designs.

We will listen to a short selection of music. Listen for how it makes you feel. Does your foot tap the beat? Does your body sway side to side slowly?

After we listen with our eyes closed, I'll play it again, and I'd like you to use the markers, crayons (paints) to express how the music makes you feel. There is no one-way, it is about how the music speaks to you. Your work should stay inside the rectangle with the letter B. So close your eyes as I play the first selection.

Excellent, now let's look at the A rectangle. At the top is a new word allemande. This is also a dance term that you may have heard of if you did square dancing. It was a term to describe how the dancers should pass each other, allemande left or allemande right. So close your eyes and see how this music connects to you

Okay, are you ready for your interpretation? Let's listen as you express yourself in the A rectangle.

Our third section is C for cantata. Mr. Cornils told you that Mr. Bach wrote a cantata every week for use in the church. Do you remember what a cantata is? Is it something you dance to, sing to, or clap to? Correct, it is something you sing to.

Let's listen, repeat, etc.

Our final rectangle is H. Besides playing the pipe organ Bach also played the harpsichord. It looks like a piano but it was invented long before the piano and was often played during the evenings when the family might dance or sing. Mr. Cornils also plays the harpsichord.

Let's listen, repeat etc.

At various times point out some work of students or ask them to tell you about their expressions. What did you hear?

Students will put their name on their paper and take theirs with them.

Each class of 15 – 17 has about 20 – 25 minutes to complete the activity.



KOTZSCH-O-RAMA

MUSIC, EMOTIONS, AND CREATIVE WRITING

LEARNING OBJECTIVES

- Explore connections between music and emotions.
- Investigate the relationship between sounds and music to colors and feelings.
- Experience the creative process of drawing and writing.

LESSON DEVELOPMENT

Students listened to Bach's Toccata No 4 in F Major and Fugue in g minor several times.

After several listening times each child chose the music to represent in drawing and writing. The class spent time discussing what emotions or thoughts came to mind when listening to the selections. A lively discussion proceeded the actual completion of the items.

It helped to list the emotions and "pictures" on the board for ideas to expand from simple concepts to more depth of thought that assisted their writing.

The drawing was completed in one class setting and the writing during language arts class. The writings and drawings were posted for review.

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.



I chose a song by Bach called "No. 4 in F Major." My scene is about a carnival and dancing. Dancing because his song made me feel like dancing. In the background there is a Ferris wheel with 12 carts. On the right you see a group of people letting go of their balloons. That's how the music makes me feel like. Bless I., Reiche Elementary School, Portland, Maine.



"No. 4 in F. Major" made me feel like I was in a circus or carnival. It made me feel happy, like I was having a great time eating cotton candy. I really like this song. Najla, Reiche Elementary 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*

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: Is this an organ? *Some will say no – can't see pipes, no pedal board, etc.*

How is this different from Kotzsch Jr?

How is this similar to Kotzsch Jr?

Divide the group into four or five groups of four to six 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 three ranks.
- * Note length of pipes and correlation to low, medium, and high.
- * Note how sliders move – “Swiss cheese sandwich.”
- * 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.

KOTZSCH-O-RAMA

ORGAN EXPLORATION (CONTINUED)

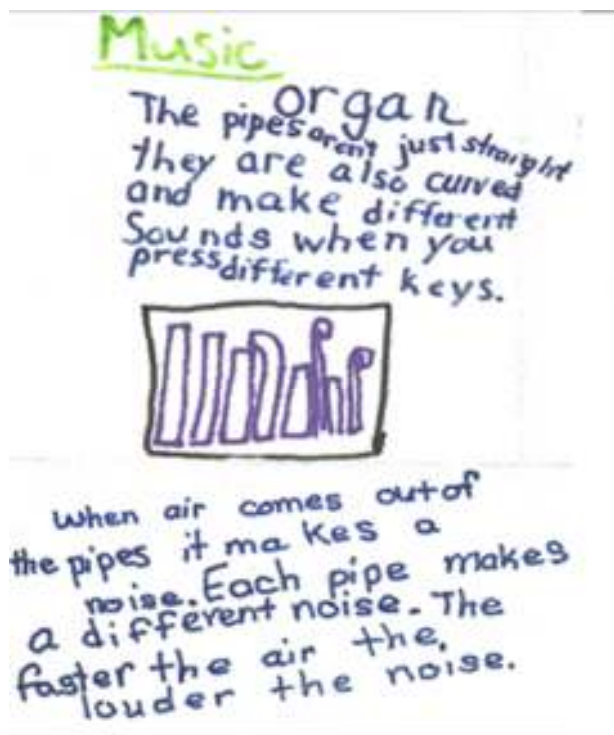
Group 4: On/Off switch

- * 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 on the organ. Enjoy how it comes back to life.
- * Make the connection between the organ lungs and 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 lose 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.



RESOURCES

Web Sites

B.A.C.H Painting

<http://www.youtube.com/watch?v=xVxwuirUX-M>

badinerie

Lighthearted music

Bach's suite in B minor for flute, string and continuo – last movement

Allemande

First German dance segment in a baroque dance in 4/4 time

Pastorale in F Major BWV 590

<http://www.youtube.com/watch?v=Kpqm1hxgH-w>

Harpsichord

Baroque keyboard instrument with strings that are plucked

Harpsichord Concerto No 1 in D minor 1052

<http://www.youtube.com/watch?v=JY6O3MSBY3Y> - symphony

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

cantata

choral work to “sing”

Cantata no 140, “Sleepers Awake”

Badinerie	Allemande	Cantata	Harpsichord
Light hearted music	First German dance segment in a baroque dance in 4/4 time	Choral work to “sing”	Baroque keyboard instrument with strings that are plucked
B	A	C	H
Bach's suite in B minor for flute, string and continuo	Pastorale in F Major BWV590	Cantata no 140 Sleepers Awake	Harpsichord Concerto No 1 in D minor 1052

BACH WORDSEARCH PUZZLE

JSBACH
BELLOWS
MRRAYCORNILS
JUNIOR
OCTAVE
LEIPZIG
PIPEORGAN
PUMP
COFFEE

FLUE
REED
CANTATA
PIPES
HIGHER
HANDS
FUGUE
SCALE
WIND

MANUAL
KOTZSCHMAR
LOWER
TOCCATA
FEET
CONCERTO
MUSIC
STOPS
PEDALS

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

Word Search Answer Key

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

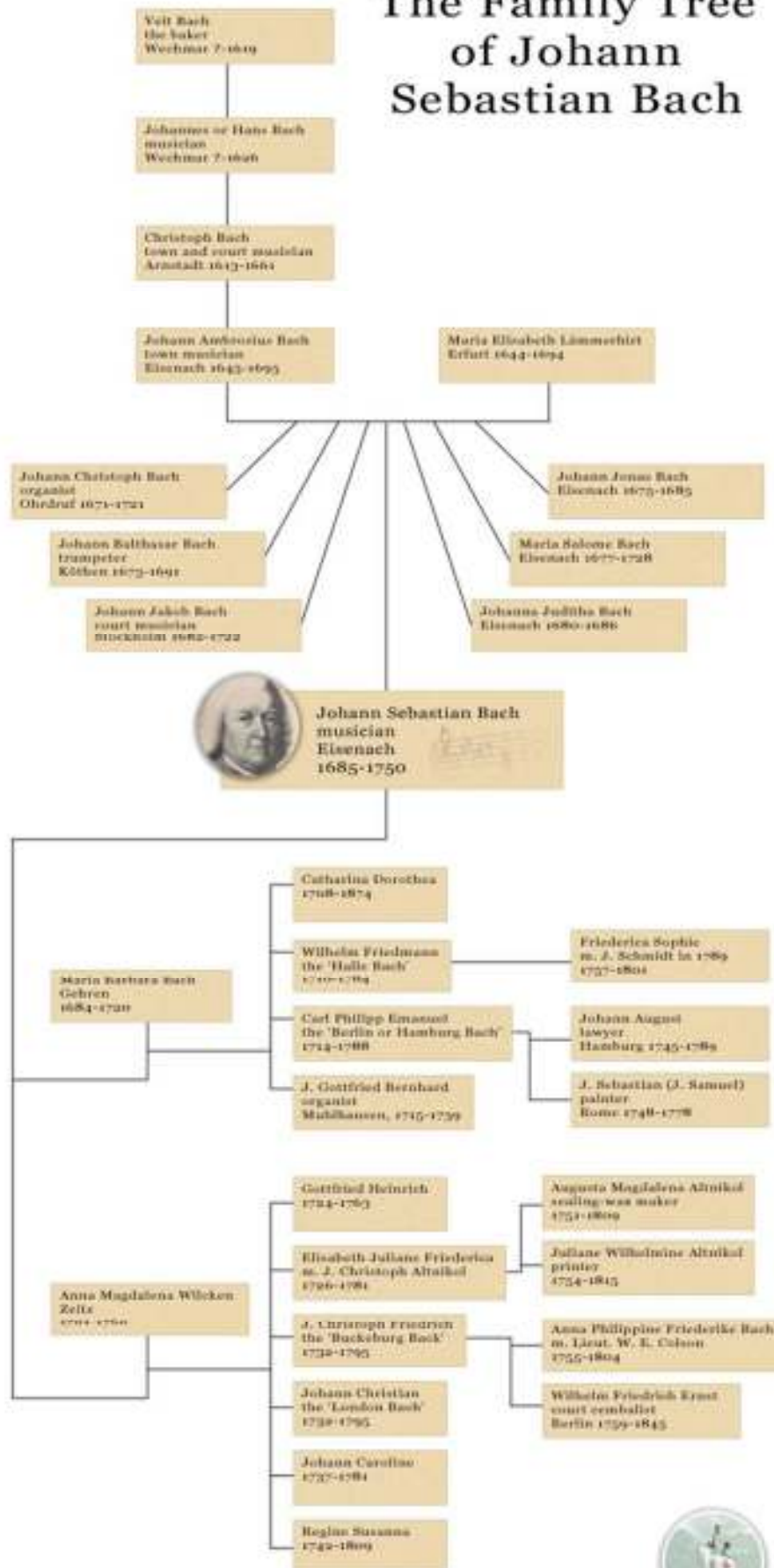


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The Family Tree of Johann Sebastian Bach



source: The Bach Family by Karl Geiringer

www.classichistory.net

Please teach your students to sing this melody.
They will be asked to participate in singing this at the concert.

Subject Little Fugue in g minor

J. S. Bach



J. S. Bach com-posed this lit-tle mel-o-dy.

BACH RAP!
Students from Loranger Middle School
Old Orchard Beach, Maine
George Shabo, Music & Band Instructor

On the next page is an example of a rap generated by the students. They wrote verses using the information they had learned about Bach during the artist-in-residence classes.

For performance, the marimbas played the subject of the Little Fugue in g minor twice at the beginning, and once in-between each verse. A drum set kept the beat for the rap.

You might want to challenge your students to write a rap with input from the music teacher.



My name is Johann Sebastian Bach
 I did not live in the time of rock
 I was born 1685
 Today my music is still alive!

I wrote Toccatas, Cantatas, and Fugues
 Composed lots of music for churches too
 Had two wives and 20 kids
 Four of them were famous, just like me!

I lived in Germany my whole life
 Ate German sausage with a fork and a knife
 Loved the taste of coffee so much
 Deep dark roast, I couldn't get enough!

I lived with my bro, who didn't have a fro.
 Christopher was his name and he was rather lame,
 I took his big ole music book,
 And that is all it really took!

I left his house, quiet as a mouse
 Went to get job so I didn't join the mob.
 Walked two hundred miles just to play
 Started to compose, the organ was the way.

I quit my job in '17, but they put me in prison
 Cause he didn't want me to leave.
 Wrote some great music while sitting in my cell.
 The music was performed in the cities where I
 traveled.

From Eisenach to Vaymar
 To Lunenburg and Cothen
 I played the Harp-si-chord
 And the pipe organ!

Complications from surgery ended my life
 My greatness wasn't realized, but
 thanks to my wife,
 My music was saved for all to enjoy
 To be played by young girls and boys!

(End: 4 times – said aloud)
 Bach! Bach! JS BACH

Organ Website Links

Bach's Music

Brandenburg Concerto # 1

<http://www.youtube.com/watch?v=Zpf38dQpMzk>

Jesu, Joy of Man's Desiring (orchestra and choir in German)

<http://www.youtube.com/watch?v=3Mn1ibFdXDU&feature=related>

children's choir arrangement

<http://www.youtube.com/watch?v=NAu-tmhU7Rk>

Celtic woman arrangement

<http://www.youtube.com/watch?v=iPeVIuRjUi4>

Little Fugue in g minor

Played on the organ – Tom Koopman

<http://www.youtube.com/watch?v=PhRa3REdozw>

Played with animation

http://www.youtube.com/watch?v=p1XD1MSES_8

Minuet in G played on harpsichord

<http://www.youtube.com/watch?v=KqSAGwa49MM>

Toccata and Fugue in d minor

Played in a cathedral in Germany

<http://www.youtube.com/watch?v=CTVraVgzC9U&feature=related>

played in Sydney Australia

http://www.youtube.com/watch?v=_FXoyr_FyFw

played on musical glasses

http://www.youtube.com/watch_popup?v=XKRj-T4l-e8&vq=large

Fanfare from *Water Music*

<http://www.youtube.com/watch?v=I0HUPhK8qmA>

Toccata - Organ Destruction – (just for fun)

<http://www.youtube.com/watch?v=jaSfOx43ykQ>

Kotzschmar Organ

Thomas Heywood plays Krazy About the Kotzschmar Organ

http://www.youtube.com/watch?v=w187_BsdmTc

Ray Cornils plays the Kotzschmar Organ Boellmann *Suite Gothique*

<http://www.youtube.com/watch?v=dVJhYbNIC0M>

How a pipe organ works

<http://www.youtube.com/watch?v=rBskjhd076o>

from Discovery channel

How a harpsichord works

<http://www.youtube.com/watch?v=71x4MSlpGUk>

Addams Family Theme on the harpsichord

http://www.youtube.com/watch?v=yIZIzdKT_Fg



What I Have Learned About the Pipe Organ

Lesson 1 Assessment

Name _____

1. The first pipe organs existed about _____ years ago.

possible answers: 100 400 1,000 2,500

2. The keyboard played by hands is called a _____.

3. The keys played by your feet are called _____.

4. To make a pipe sound you: (there may be more than 1 answer)

a. shake it

d. pump the bellows

b. blow into it

e. pull out a stop & press a key

c. strum it

5. The longer the pipe, the _____ the pitch.

a. higher

c. lower

b. louder

d. softer

6. In olden times, before electricity, someone had to _____ the organ,
using a bellows.

a. play

c. listen to

b. pump

d. watch

7. Today I learned:

Johann Sebastian Bach Comes to Visit

Lesson 2 Assessment

Name _____

Please fill in the following blanks about J.S. Bach.

1. J. S. Bach lived about _____ years ago

possible answers: 100 200 300 400 500

2. Johann's father played the _____.

3. Johann had _____ wives and _____ children.

4. Johann worked for churches and also a _____.

5. In Bach's time, someone had to _____ the organ, using a bellows.

6. Some of the foods that Johann might have eaten are _____, _____,
_____.

7. Match these words to their definitions (draw a line to each)

A piece to be sung Johann wrote a
new one of these every week for church.

FUGUE

A piece that is very fast and difficult
to play.

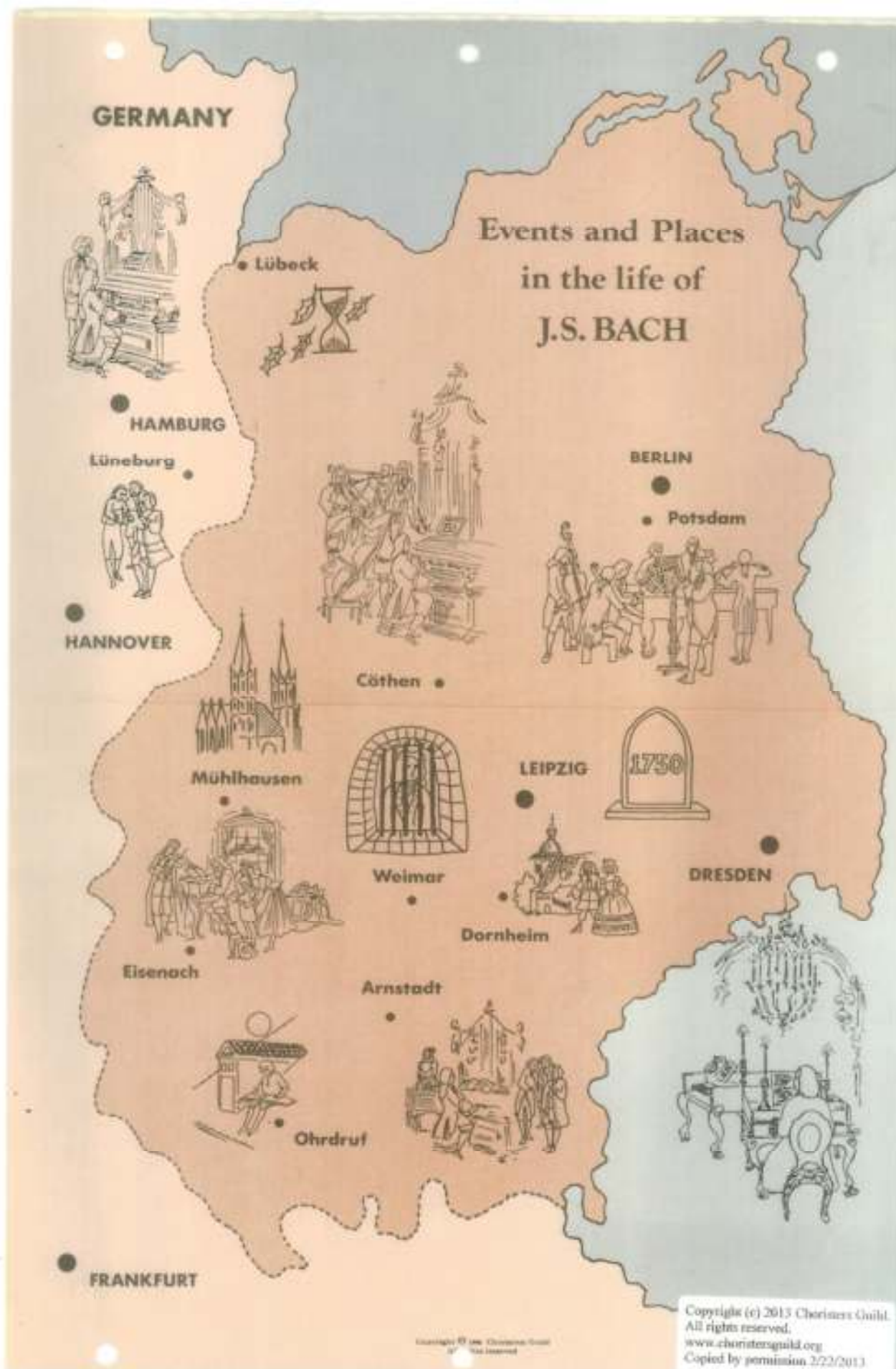
CANTATA

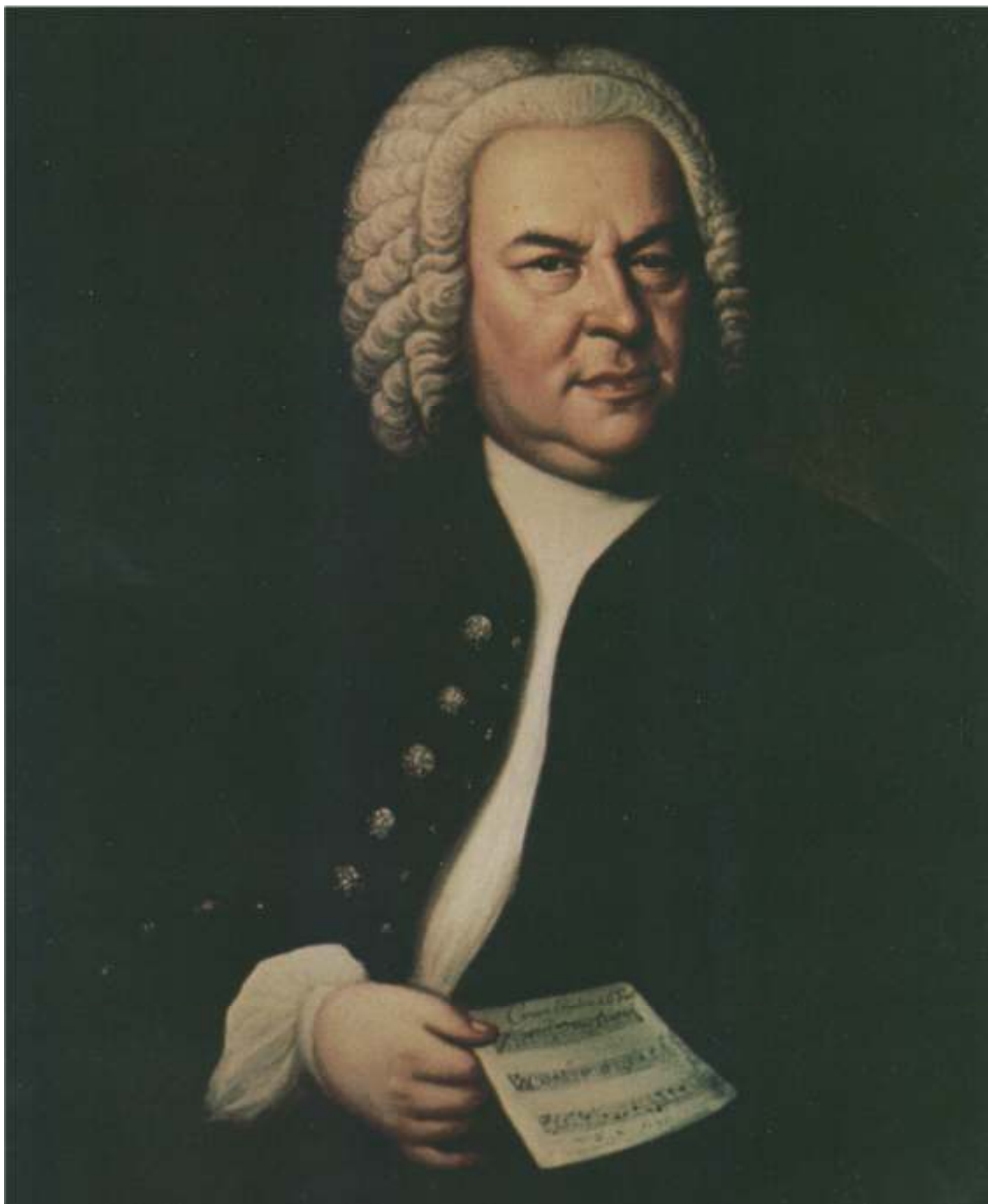
A piece that begins with a subject (theme)
that is heard many times during the piece.

TOCCATA

True or false:

- | | | |
|---|---|---|
| 1. Some of Bach's music was written for dances. | T | F |
| 2. Bach hated the taste of coffee. | T | F |
| 3. Bach spoke only one language, German. | T | F |
| 4. Bach played the harpsichord. | T | F |
| 5. Bach played the piano. | T | F |





**THE
HIMMELSBURG**
("CELESTIAL CASTLE");
INTERIOR OF THE
CASTLE CHURCH AT
WEIMAR.

Gouache by Christian
Büchtemann, c. 1660. Kunstsammlungen
zu Weimar.

The Weimar Castle Church was built in the southeast part of the castle in 1658; it was destroyed by fire in 1774. From July 1708 to December 1717, Johann Sebastian Bach served as organist and chamber musician to the Court of Weimar. The organ on which Bach performed was situated in an upper room built into the chapel ceiling, the so-called *Himmelsburg* or "celestial castle." Bach's Weimar cantatas were also performed in the castle church.



Instruments Played by J.S. BACH

CLAVIERS

(All keyboard instruments, except the organ, were known by this term in Bach's time.)



Pianoforte

A keyboard instrument that was named for its capacity for being played at any volume from soft ("piano") to ("loud.") It combines the keyboard design of the clavichord, harpsichord, and organ with the hammer action of the dulcimer. The strings are sounded by lever-activated padded hammers. Bach tried out some of the new pianos owned by Frederick the Great when he went to visit his son at the ruler's court.



Harpsichord

A harp-shaped, wire-strung keyboard instrument that looked like a small grand piano. Its strings were plucked with quill or leather points when keys were pressed down, and damped with felt pads when keys were released. Sometimes it had more than one manual (keyboard.) The player had little control over the volume (loudness) or (softness) of the tone or the length of time individual notes could be held, as there were no expression or sustaining pedals. Harpsichords were popular from the 16th to 18th centuries, and were used both as solo instruments and in chamber groups and orchestras. Bach liked the harpsichord better than the pianofortes which were beginning to be used in his lifetime.

Clavichord



A keyboard instrument that had horizontal strings that were struck with small brass pins when the keys were pressed. It had a soft, metallic tone and was used mainly as a solo instrument for that reason.

STRINGS

Violin

A four-stringed treble viol instrument played with a bow. Bach learned to play the violin from his father at an early age. When his voice changed he could no longer sing in the boys' choir at St. Michael's School in Lüneburg, he played his violin instead. He also was violinist to the Duke of Weimar before he became court organist, and later wrote music for violins.



Viola



A middle-sized viol instrument invented by Bach. It was between the size of tenor violin and a cello and had five strings.

ORGAN

A wind instrument made up of one, to many sets of pipes sounded by compressed air and played by one or more keyboards. Bach was considered the outstanding organist of his time, and was often called to inspect, evaluate, and supervise the repair of different organs in his area. However, his greatness as a composer of music for the organ was not recognized until years after his death.



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GENEALOGICAL TABLE OF THE BACH FAMILY

Grand grandfather: JOHANNES (HANS) BACH (b. 1, 4. 1828) (died at 80) was a baker to become an apprentice to the Town Piper at Götting. He married ANNA SCHMIED, an innkeeper's daughter from Wiedemar. They had three sons.

Grandfather: CHRISTOPHER BACH (b. April 19, 1613, d. September 12, 1661) studied instrumental music and then served as a musician in the Court of Weimar, and in the towns of Erfurt and Arnstadt. He married MARIA MAGDALENA GRABLER from Mühlhausen. They had three sons.

Great great grandfather: VEIT (VITUS) BACH (b.?, d. March 8, 1818) was a German baker who had gone to work in Hungary, he was a Lutheran, and when his origins was no longer accepted in that country, he returned home to Thüringa, settling in the village of Wechmar. There he continued to work as a baker. In his spare time he played the "clittern," a musical instrument that looked something like a guitar.

Veit
d. 1619

Lips
d. 1620

Johann
1604-73

Heinrich
1615-92Christoph
1613-61

Father: JOHANN AMBROSIVS BACH, b. Feb. 22, 1645, d. 1695) was Court and Town Musician in Eisenach. He married ELISABETHA LEMMEBETH, daughter of Valentin Lemme-



J. Egidius	J. Christoph	J. Michael
1645-1717	1642-1703	1648-94

Ambrosius
1645-95

Ambrosius
1645-95

J. Bernhard
1676-1749

Maria Barbara
1684-1720

Anna Magdalena
Wilcken 1701-60

J. Ernst
1722-77W. Friedeman
1710-84

P. Emanuel
1714-88

G. Bernhard
1715-39

Elisabeth Juliane
F. (Altnikol) 1726-81

J. C. Friedrich
1732-95

J. Christian
1735-82



The large, musical Bach family members gathered together each year in Erfurt, Eisenach, or Arnstadt for a family reunion. Some of the family members were well known as composers, organists, or other musicians. They would begin by singing a chorale. Then they would sing hymns, often improvising on the tunes. Then they would go on to sing 500 songs, often improvising on the tunes, including all hymns, and even singing several songs together at once in a "Spinnelied." There was much laughter and joking, and everyone had a good time.



Rev. JOHANN SEBASTIAN BACH, born March 21, 1685, d. April 28, 1750, was a German composer, organist and harpsichordist, famous for his works for the New Church in Leipzig and at St. Michael's Church in Halle. He was a contemporary of Martin Luther and was the first Protestant composer for the Protestant Church. He was the first Protestant composer for the Protestant Church. He was the first Protestant composer for the Protestant Church.

Wendel
1619-82

Jakob
1655-1718

J. Ludwig
1677-1731



Coffee-house in Leipzig

S T. THOMAS
CHURCH AND
SCHOOL, LEIPZIG.

Engraving by Johann
Georg Schmeiss, after 1732. Bach-
Archiv, Leipzig.

Bach first moved his family into their quarters in the St. Thomas School on May 22, 1733. This engraving was made after the 1732 renovation of the school in which a third story was added to the building. The Rector's apartment was in the north end of the building while the cantor's quarters occupied all three floors of the south end of the

associated school. The central portion of the building contained the library, rehearsal room, and dormitory space. During the renovation which began in May 1731, the Bach family moved to Dr. Doerndorf's house—on a street which no longer exists. Cantata Anh. 38 *Freier Tag, vorläufiger Stunden* ("Joyful day, awaited hour") was performed for the reopening of the St. Thomas

School on June 5, 1732. The school building was demolished in 1902 but many of the fine buildings on the church square are now being restored.



Der Thomas-Kirchhof in Leipzig

Church and school in Leipzig

Fuga

BWV 578

Johann Sebastian BACH
(1685-1750)

The image displays the musical score for 'Fuga' (BWV 578) by Johann Sebastian Bach. The score is written for organ and is divided into three systems. Each system consists of three staves: Manual (treble and bass clef), Pedal (bass clef), and Mix (treble and bass clef). The key signature is one flat (B-flat) and the time signature is common time (C). The first system shows the beginning of the piece, with the Manual and Pedal parts starting on the first measure. The second system shows the continuation of the piece, with the Manual and Pedal parts starting on the fifth measure. The third system shows the continuation of the piece, with the Manual and Pedal parts starting on the fifth measure. The Mix part is a single melodic line that runs throughout the piece.

Explore the Little Fugue in g minor

Show the beginning of the music score to the students to demonstrate the number of notes that are being played at one time by the organist.



This is the organ that J.S. Bach played in St. Boniface's Church in Arnstadt, Germany when he was 18.



Sample of Bach's composing one of his compositions.

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.
a. Demonstrate skills in the use of media, tools, techniques, and processes. b. Demonstrate knowledge of visual art concepts. c. 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.

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 instrument.

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.

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

Education

www.foko.org/education

