

ZOELLNER ARTS CENTER

420 East Packer Avenue
Bethlehem, PA 18015-3179
(610) 758-2787
www.ZoellnerArtsCenter.org

EDUCATOR'S GUIDE:

ScrapArtsMusic

Children of Metropolis



Sneak a Peak Before attending the show, visit ScrapArtsMusic's website to watch videos of the group, listen to audio, see some of their instruments or learn more about the musicians.
www.ScrapArtsMusic.com

THURSDAY & FRIDAY, OCTOBER 17-18, 2019 AT 10:00AM
BAKER HALL AT ZOELLNER ARTS CENTER

USING THIS STUDY GUIDE

On Thursday October 17, or Friday, October 18 your class will attend a performance by ScrapArtsMusic, at Lehigh University's Zoellner Arts Center, (ZAC) in Baker Hall.

You can use this study guide to engage your students and enrich their Zoellner Arts Center field trip. Materials in this guide include information about the performance, what you need to know about coming to a show at Zoellner Arts Center and interesting and engaging activities to use in your classroom prior to, as well as after the performance. These activities are designed to go beyond the performance and connect the arts to other disciplines and skills including:

Music & Composition
Math & Science

Environmental
Visual Arts

English/ Language Arts
Marketing

Media & Technology
Theater & Performances

BEFORE ATTENDING THE PERFORMANCE, we encourage you to:

- Review the "know before you go" items below with your students.
- Read the study guide to choose activities to do before and after the performance that meet the objectives of your classroom.
- Review the standards in blue to help align the production with your objectives.
- Don't miss pre-show discussion questions on page 2 and vocabulary- Words to Know on page 9.

AT THE PERFORMANCE, we encourage you to:

- Encourage your students to stay focused on the performance.
- Before you get started, think of what you already know about musical groups. Keep this in mind as you watch the performance.
- Reflect on how various show components such as instruments, musicians, lighting, sounds, performance skills are different from other musical groups you have seen?

AFTER THE SHOW, we encourage you to:

- Discuss the post-concert questions with your class, page 8.
- Enter to Win - Teachers may enter to win a free CD by fill out questionnaire on page 11.

WE LOOK FORWARD TO SEEING YOU!

KNOW BEFORE YOU GO

Whether this will be your students' first visit to a theatre or one of many visits, it is always a good idea to speak with them about proper theatre etiquette. Please review the notes below to help make the experience enjoyable for all audience members, staff, and performers.

BE PREPARED AND ARRIVE EARLY. Ideally, you should arrive at the Zoellner Arts Center 25-30 minutes before the show. Allow for travel time and bus unloading or parking and plan to be in your seats at least 15 minutes before the performance begins.

BE AWARE AND REMAIN QUIET. The theater is a "live" space. You can hear the performers easily, but they can also hear you. Even the smallest sound, like rustling papers and whispering, can be heard throughout the theater. It is best to stay quiet so everyone can enjoy the performance without distractions. Please remember to silence your mobile devices too!

SHOW APPRECIATION BY APPLAUDING. Applause is the best way to show your enthusiasm and appreciation. Performers return their appreciation for your attention by bowing to the audience at the end of the show. It is always appropriate to applaud at the end of a performance, and it is customary to continue clapping until the curtain comes down or the "house lights" (the lights over the audience's seats) are turned on again.

PARTICIPATE BY RESPONDING TO THE ACTION ONSTAGE. Sometimes during a performance, you may respond by laughing, crying or sighing. By all means, feel free to do so! Appreciation can be shown in many different ways, depending on the art form. For instance, an audience attending a string quartet performance will sit very still, while the audience at a popular music concert may be inspired to participate by clapping and shouting. The artists may ask you questions or invite you to participate in the show by clapping or even joining them on stage. You should feel free to join or not, but if spoken to directly, please respond politely.

CONCENTRATE TO HELP THE PERFORMERS. These artists use concentration to focus their energy while on stage. If the audience is focused while watching the performance, the artists feel supported and are able to do their best work. They can feel that you are with them

PLEASE NOTE: Backpacks and lunches are not permitted in the theater. There is absolutely no food or drink permitted in the seating areas. Recording devices of any kind, including cameras, cannot be used during the performances. Please remember to silence your cell phone and all other mobile devices. The artists are performing challenging and sometimes dangerous work which can become more dangerous by outside distractions.

ScrapArtsMusic



EDUCATOR'S GUIDE



Dear Educators,

The musicians in ScrapArtsMusic are delighted to be performing for your students. ScrapArtsMusic re-invents do-it-yourself musical performance from the ground up with a creative, kid-friendly and eco-positive mandate. Thrown away material becomes the foundation for a new generation of sound and visual discovery. Unforgettable power-percussion is the result. ScrapArtsMusic transforms scrap into art and arts into music.

ScrapArtsMusic features exceptional performers with instruments beautifully sculpted from salvaged and recycled materials. Expect to see and hear a fast-paced show built around exotic exhaust hose, artful artillery shells, and resonant recycled metals.

ScrapArtsMusic introduces students to green ingenuity, innovation and excellence. It features original percussion music composed specifically for the ensemble by Gregory Kozak, a brief introduction to “scrap” instruments used in the presentation, and insight into how the music is composed and the choreography is developed.

In addition to providing entertainment, ScrapArtsMusic strives to open young minds to the art of the possible, encouraging creative thinking and opportunities for discussion and enrichment. To help you connect this production to your classroom curriculum, we have included related teaching activities with this guide. Please pick and choose activities that best meet the objectives of your classroom and the learning needs of your students.

To further help you with aligning this production to your curriculum, we have included appropriate standards, indicated in blue throughout.

Enjoy the show!

PS Please send a copy of this to ALL teachers so that they may prepare and follow-up with their students. Also, teachers may enter to win a ScrapArtsMusic CD by submitting the questionnaire found on page 11. Feedback helps us to refine this presentation for students, so thanks for your help!

SCRAPARTSMUSIC EDUCATION TEAM

Justine Murdy & Gregory Kozak
Questions? Contact us at 604 669-2112 or
info@scrapartsmusic.com

TABLE OF CONTENTS

We Want Your Feedback	1
Introducing ScrapArtsMusic	2
Educational Goals for Students	2
What to Expect/Pre-show Discussion	2
Look, Listen, Think and Feel	2
ScrapArtsMusic Instruments	3
Rhythm and Sound Connection	3
Good Vibrations	3
Create Your Own Instruments	6
Something From Nothing	6
Environmental Activities	7
Research Ideas	7
Music Then and Now	7
Post-concert Discussion Questions	8
Fast Facts about Garbage	8
The Human Footprint	8
Vocabulary - Words to Know	9
Writing Ideas	9
Vocabulary of Garbage	10
Additional Learning Resources	10

WE WANT YOUR FEEDBACK

Evaluate the ScrapArtsMusic performance and get a chance to win a Scrap Arts Music CD for your school library! Please find the form at the end of this resource. This is your opportunity to provide us with the feedback and ideas that are important to you and the other educators and adults in your group. Please encourage your colleagues to submit their forms too. Increase your school's chances to win the CD! Your feedback educates us about the ways the program is used and we are often able to implement some of your suggestions. In the future we hope to add student evaluation forms to our site. You will have the option to print out evaluations for each student or have students enter their responses online.

We look forward to hearing from you!

INTRODUCING SCRAPARTSMUSIC!



ScrapArtsMusic is innovative percussion theater featuring five hyper-kinetic performers (Gregory Kozak, Spencer Cole, Christa Mercey, Greg Samek and Malcolm Shoolbraid) who play amazing instruments skillfully crafted from salvaged and recycled junk.

ScrapArtsMusic is led by multi-talented composer and percussionist Gregory Kozak. He is joined behind the scenes by Justine Murdy, a designer and co-founder of the company, who works with Gregory to take the surplus waste of North American industry, and design and build articulated musical instruments from materials such as exhaust hoses, artillery shells and broken monkey bars.

In the hands of our artists and musicians, industrial scraps become the basis for a dynamic, choreographed groove-based fusion of world music traditions and 21st century sounds suitable for all ages.

Our Educational Goals for Students:

- Exposure to original, rhythmically-rich percussion ensemble music
- Recognition of new ways to recycle scrap materials
- Willingness to accept new ideas of music and instrumentation
- Appreciation of musical structure in terms of elements of rhythm, pitch and melody
- Understanding the inter-relationship of music with science, visual arts, dance and theater
- Alternative ideas about what constitutes a musical instrument

WHAT TO EXPECT

ScrapArtsMusic's educational show is approximately 55 minutes long with no intermission. The presentation features original percussion ensemble music, a brief introduction to "scrap" instruments and their construction, and insight into how the music is composed and the choreography developed. Just before the last composition is performed, we'll be looking for volunteers to help us with a popular student participation piece. In some venues there will be a brief Q & A session prior to the last piece as well. Information

given during the educational show is tailored to the grade levels of the audience.

Pre-Show Discussion

1. What types of musical events have you attended?
2. Music has always been an important part of cultures around the world and throughout time. What do you know about music from other times or cultures? What are some ways we use music in our culture? How do you use music in your own life?
3. ScrapArtsMusic uses original instruments made from recycled materials. Imagine going through the trash, a junk yard or a recycling center. What types of materials might you find? How might you put odd materials together to produce sounds?
4. Discuss behavioral expectations for attending a musical concert.

English Language Arts Standard: Participate effectively in discussion

LOOK, LISTEN, THINK AND FEEL!

Musical performances offer a chance for students to look, listen, think and feel. Ask students to...

Look...

- Do the percussionists stand still or move with the music?
- How are the musicians dressed? Does their clothing matter?

Listen...

- Listen to different sounds. Where are the different parts coming from? Can you pick out the sounds of different instruments? Can you determine which kinds of instruments make loud or deep noises and which make soft or higher pitched noises?
- Can you detect rhythms, melodies or harmonies?

Think...

- What are some different feelings you experienced during the music?
- What skills must the musicians possess to successfully contribute to the group?

Music Standard: Demonstrate perceptual skills by listening to, answering questions about, and describing music of various styles, representing diverse cultures

SNEAK A PEAK

Before attending the show, visit ScrapArtsMusic's website to watch videos of the group, listen to audio, see some of their instruments or learn more about the musicians.

www.ScrapArtsMusic.com

SCRAPARTSMUSIC INSTRUMENTS



ScrapArtsMusic uses an array of original and creatively designed musical instruments made from everyday materials. Through careful construction, coordination and orchestration, these materials are put together and used in such a way as to create music. Read the names of some of their instruments and ask students to guess what they are made of and how they might work before you read the descriptions. Distribute a list of the instruments. Have students choose one and draw what they think it might look like.

Music Standard: Analyze and describe uses of the elements of music in a given work that make it unique, interesting, and expressive

RHYTHM AND SOUND CONNECTION

Have your students look around the classroom and identify materials that could be used to make rhythmic sounds. Examples could be the sounds of a clicking pen, chalk tapping on a blackboard, chalkboard brushes clapping together, notebook paper rustling, and the squeaking of sneakers on a floor. Discover all the sounds that are in your classroom. Carefully select a few items in your classroom that can be used to create a rhythmic or musical composition. Have each student make their selection. Let one student establish a rhythm with one of the items and have another layer a second rhythm on top. Improvise a jam session of classroom sounds around the rhythms. Have students identify which sounds work well together.

From your improvisation, create a running order for a piece of music. List the different sounds and the order in which they appear. Perform the piece again and see if it has improved. If the students are confident, invite them to make vocal improvisations. Have them name the composition and suggest physical movements that go with it.

Music Standard: Compose short pieces within specified guidelines, demonstrating the use of the elements of music

Music Standard: Compose music in several distinct styles, demonstrating creativity in using the elements of music for expressive effect.

Music Standard: Improvise simple harmonic accompaniment
Music Standard: 1 Improvise stylistically appropriate harmonizing parts.

GOOD VIBRATIONS

What is sound? Sound is caused by vibrations. Instruments make sounds by vibrating. When you hit a drum, the drum head vibrates, causing a sound. When you strum a guitar, the guitar strings vibrate causing a sound. Singing is the result of vocal cord vibrations.

When you tighten your vocal chord, you will produce a high sound. When you loosen your vocal chord, you will produce a lower sound. How do you tighten or loosen your vocal chords?

Experiment: Try singing a note, opening and closing your mouth to varying degrees. What happens to the note?

Experiment: Demonstrate, with a guitar, recorder, violin, cello and drum (adjustable tension), how notes of different pitch and loudness can be made. What conditions would cause a lower sound? A higher sound? How might this relate to different types of instruments?

Experiment: Hold a wooden ruler so that the edge hangs over a desk or table. Hold the ruler in place and push down on the end that is hanging over the table. Listen for the sound. Now move the ruler so that more or less is hanging over the edge. How does the sound change?

Did you notice a difference in the sound and how fast the ruler vibrated? This is frequency.

Explain. Were there any differences between how fast the ruler vibrated and sound of the ruler? Explain. What did you find out from this experiment?

When the ruler vibrates, the speed at which the vibrations occur determines its frequency. The length of a vibrating object affects its pitch. How might this relate to different types of instruments?

Ask students to make generalizations about differences in the sounds in musical instruments. For example:

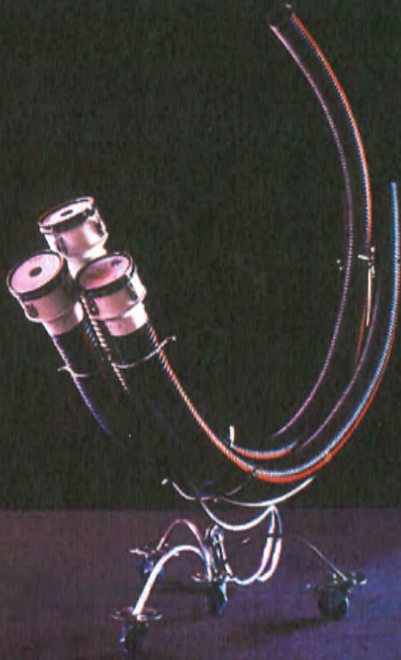
- the thinner the string, the higher the sound
- the greater the movement, the louder the sound
- the faster the movement, the higher the sound

Science Standard: Use inferences to help decide possible results of their investigations, use observations to check their inferences

Science Standard: Use accepted scientific knowledge, models, and theories to explain their results and to raise further questions about their investigations

Science Standard: State what they have learned from investigations, relating their inferences to scientific knowledge and to data they have collected

A million acts of green...



Scorpion Drums



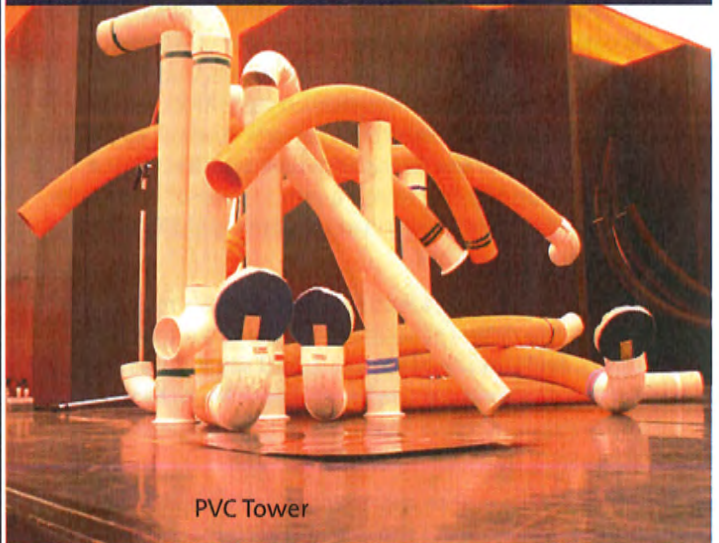
Chime Array
& Gong Array



The Mojo



Alumo-springs



PVC Tower

ScrapArtsMusic Instruments

“Using industrial scrap and everything from artillery shells, accordion parts and brass sheets to balloons, dishwasher hoses and bagpipe reeds, Kozak just may have single-handedly performed a million acts of green. Who knew that scrap yards and dumps were treasure troves for the makings of new and marvelous musical instruments?”

Winnipeg Free Press, Canada



Ziggurat Drum



Humunga Drum



Bell-Flower Chime



ScrapArtsMusic Artists on Humunga & Hourglass Drums



B-52 Drum

CREATE YOUR OWN INSTRUMENTS



ScrapArtsMusic's instruments are made up of just about any found object. Gregory Kozak, the instrument designer for Scrap Arts Music, chooses his source material based on the sounds made when the objects are struck, strummed, bowed, blown or whirled.

Ask students to use their imaginations to invent their own musical instrument. What materials would you use? What kind of sound would it make? What names would you give to the instruments? Why? Take this activity a step further and have students create their own instruments. Students can then use the instruments to create a variety of simple melodies or rhythms, alone and in small groups. Below are some ideas about how you can make scrap instruments from found objects.

BOTTLEPHONE

A bottlephone is a tuned percussion instrument consisting of a series of ordinary glass bottles and/ or jars. Put together a group of bottles and jars of different sizes and shapes, and strike them with a beater or stick to hear the notes they produce. Put the bottles in order according to their notes, from highest to lowest. Play simple tunes.

A bottlephone that is constructed out of a variety of bottles and jars will not play in tune, but if you can find a series of bottles that are exactly alike, you can create a tuned percussion instrument. Pour a different amount of water in each bottle, ranging from fairly full to almost empty. By adjusting the amount of water in each bottle, you can tune your bottlephone to play the notes of a scale. The sound quality will vary when your bottles are placed on different surfaces, i.e. carpets, cement, or a wooden floor. See which surface gives you the best sound—and don't break your bottle!

DRUMS

Drums can be made out of a variety of containers, including coffee cans, tin cans, garbage cans, pots and pans, yogurt containers and buckets. Turn any of these objects over and they make good drums. Try stretching a piece of rubber or cloth tightly over the open top. Strike the cloth with your hand or a drum stick. What happens as the cloth gets tighter or looser? Tie the cloth to the can with string or rubber bands. Decorate the outside of your drum. Use a variety of cans to create your own drum set.

RATTLES AND SHAKERS

Mexican maracas and African gourd axatse are two examples of rattles and shakers - simple percussion instruments that produce sound when shaken. These instruments are simple to make. Put a handful of buttons, dried peas, beans, or rice into a container such as a yogurt container, coffee can or a pop can. Be sure to replace the lid firmly. Shake the

container. How does the sound of the shaker change when different materials are placed inside it? You can make a good jingling shaker by threading bottle caps on a metal coat hanger or by pounding a long nail through three bottle caps and into a broomstick. Use a series of bottle caps to make a more pronounced rattle.

STAMPING STICKS

A variety of cultures from around the world use a percussion instrument known as a stamping stick. These hollow sticks are pounded across the ground and create a strong loud beat for singing and dancing to. Usually one end of the stamping stick is closed, and that end is beaten against the ground. The rhythmic sound echoes up the tube. Collect a variety of tubes to create your own stamping sticks. Toilet paper tubes, paper towel tubes, wrapping paper tubes, and carpet tubes will all work well. Cover one end of the tube with tape or cardboard, and leave the other end open. Decorate the tubes with colors and patterns. Bang the tubes rhythmically on different surfaces and see what sounds they produce. Join up with a friend and combine your rhythms!

Music Standard: Play by ear simple melodies on a melodic instrument and simple accompaniments on a harmonic instrument

Music Standard: Use a variety of sound sources and electronic media when composing and arranging

SOMETHING FROM NOTHING



ScrapArtsMusic's musicians are highly creative. Not only do they make instruments from recycled junk, but they use their instruments and their bodies in creative ways. Creativity is a highly desirable trait. The students of today will invent the world we will live in tomorrow. Creative individuals will be needed in the future to invent new items, design cures and medical interventions and solve the future problems of the world.

Read the picture book *Joseph Had a Little Overcoat*, by Simms Taback (Viking, 1999), a Caldecott-winning book showing how a man recycles his overcoat to make new things.

Present students with a variety of common objects such as a cup, a shoe, a pencil, a rubber band. Have students "invent"

all the unusual or different ways the item could be used. For example a rubber band could hold papers together, hold a pony tail or be used to propel objects through the air. Brainstorm ways to make new things from old things.

Inventions are often the result of creative ways to solve problems. Have students think of a problem that needs solving and then invent a solution. They can describe their inventions through words and pictures, or create inventions of their own using recycled materials. Use the library to research as needed.

English Language Arts Standard: Conduct research and inquiry on self-selected or assigned topics, issues or problems and use an appropriate form to communicate their findings
Family and Consumer Education Standard: Use practical reasoning in making choices about an individual, small group, or classroom action project

- define an existing individual, family, or community need or concern
- determine the best course of action to take in the situation

Marketing Standard: Identify common traits, beliefs, and attitudes associated with entrepreneurs

Marketing Standard: Illustrate how different products and services meet the needs of consumers

We will soon have an area on the ScrapArtsMusic web site where images of scrap instruments made by students are posted. Send digital images of your creations to info@ScrapArtsMusic.com and share your creative ideas with the world! We will eventually post the creations with whatever credits YOU tell us (i.e. whether just "Mrs. Smith's 5th grade class", or "Bell Elementary", etc.)

ENVIRONMENTAL ACTIVITIES

Metro Vancouver Recycling

In addition to its regular recycling and garbage collection, Metro Vancouver offers a recycling exchange program. Most municipalities now recycle. Area residents can search the data base to find places to donate or recycle just about anything. Recycling in this way keeps things out of the landfills and conserves natural resources!

Find a similar site for your city or check this out: <http://www.metrovancouverrecycles.org/Pages/Residential.aspx>

British Columbia Green Games

British Columbia offers a program to encourage schools to go green, demonstrating their commitment to a more sustainable Earth. This is a voluntary, self-paced program. Information and details are available at:

<http://www.bcreengames.ca/resources/for-teachers.html>

Take steps to initiate this program at your school next September. Over 20,000 prizes will be awarded!

Find out if your province or state offers similar initiatives.

Town Garbage Simulation Game

Although an American website, why not try the Dumptown Game at the EPA website: <http://www.epa.gov/recyclecity/gameintro.htm>

The game allows you to see the effects and costs that various recycling programs have on a city. Establish a budget for students and allow them to determine the most effective use of the budget and justify their choices.

Studies Standard: Locate, organize, and use relevant information to understand an issue of public concern, take a position, and advocate the position in a debate

RESEARCH IDEAS

1. Francois and Bernard Baschet were French musical instrument makers who created amazing sonic sculptures. Investigate the brothers and their instruments.
2. What types of percussion instruments have been used around the world in different times and places?
3. Recycling old or broken things helps to keep them from the landfills. How are landfills made? What happens when a landfill is full?
4. Investigate businesses that have been developed in order to find uses for recycled materials. A few to start with: Mapelopes (envelopes made from recycled maps) and RTS Canada Ltd. (Rubber Trails and Surfaces, makers of playground surfaces etc. from used tires). Did you know the 2010 Winter Olympic Medals were made with a tiny bit of the more than 140,000 tons of e-waste that otherwise would have been sent to Canadian landfills? Here's a link to the story. <http://blogs.scientificamerican.com/observations/2010/02/12/winter-olympic-medals-made-from-recycled-e-waste/>
5. Consider the worlds' garbage. How is it collected and disposed of? What are some problems caused by the overflow of garbage?

Media and Technology Standard: Locate and access information sources.

English Language Arts Standard: Create or produce writing to communicate with different audiences for a variety of purposes.

MUSIC THEN AND NOW

ScrapArtsMusic's recycled instrument music might be considered a new form of music, but it also might be considered an ancient form of music. Drums have a long history of use in cultures throughout the world. People have been making music since prehistory. From banging on hollowed logs and shaking pebbles to the evolution of electronic music and the mp3 player, people have created musical instruments, musical forms, and ways to share their music.

Create a physical timeline by attaching a string of yarn around the walls of the classroom. Assign students to research various forms of musical creations during different

time periods. They might include instruments created, composers, styles that were developed or methods of sharing music. The timeline can begin with the cavemen and end with the recently introduced iPod Nano. Students use index cards to label or draw important musical contributions and attach them with paperclips to the appropriate period on the timeline.

Possible time periods for investigation: prehistoric music; ancient music (2600-400 B.C.) from Egypt, Mesopotamia, China, Rome, Greece and Mexico; music from the Early and Middle Ages (1st-15th Century); music from various classical music periods; The Jazz Age; and modern times.

Music Standard: Describe distinguishing characteristics of representative music genres and styles from a variety of cultures

POST-CONCERT DISCUSSION QUESTIONS



1. What makes ScrapArtsMusic different from other musical groups you have seen? (Answer could include: most of the instruments are on wheels, the instruments are original, the music is original to the instrument, the instruments are moved into new shapes and played in a variety of ways to create different "looks" and "sounds," musicians use choreography.)
2. What surprised you about the instruments you saw on stage? About the choreography?
3. How are ScrapArtsMusic instruments different from traditional percussion instruments?
4. What kinds of materials does ScrapArtsMusic use to make their instruments? (Answer includes: steel, aluminum, brass, plastic hose, PVC hose, gymnastic mats, and wooden dowel 'seconds')
5. Why do you think making instruments from scrap is—or is not—a good idea?
6. What skills must a ScrapArtsMusic performer possess to be able to perform well? (Answer could include stick drumming skill, working well with others, good memory, athleticism, aerobic conditioning, theatrical skill)
7. How did attending this concert reinforce ideas about music that you have learned previously? Do you have any new understanding or awareness of music after listening to or participating in this event?

Music Standard: Evaluate a given musical work in terms of

its aesthetic qualities and explain the musical means it uses to evoke feelings and emotions.

Music Standard: Demonstrate perceptual skills by listening to, answering questions about, and describing music of various styles, representing diverse cultures.

Theater and Performance Standard: Attend a live theatrical performance and be able to explain the personal meaning derived from the experience, and also be able to analyze, evaluate, and create meaning in a broader social and cultural context in either written or oral form.

FAST FACTS ABOUT GARBAGE AND RECYCLING

Use this performance as a chance to talk about ecological issues. Use the following items to create interest, posted on a bulletin board or used as a "Thought for the Day." Recycling one can saves enough energy to power a television for three hours.

North Americans throws away so many plastic bottles each year that if they were stretched end to end they would circle the planet four times.

A pop can tossed by the side of the road will take 500 years to disintegrate. By recycling even one aluminum can, we save enough energy to operate a television for 3 hours.

THE HUMAN FOOTPRINT

We all leave a trace of our lives here on earth. We are all consumers. We use air and water for our basic survival. Electricity provides light and energy and other fuels allow us to heat our homes or power our vehicles. We consume a variety of manufactured products that require the use of natural resources. We also consume food in the form of plants and animals. Another way we leave our human footprint on the earth is through the garbage we produce and leave behind. Try these quick math activities to develop an understanding of the impact of our trash production on the world.

According to Stats Canada, each Canadian produces 383 kg of waste, per person, per year (by the residential component of solid waste, 2002). According to the U.S. Environmental Protection Agency (EPA), Americans generate about 1600 lbs of waste per person, per year. The EPA also reports that Americans recycled and composted about 550 lbs of their individual waste generation, which is a good thing! We can all recycle more.

If in Canada, multiply 383 by the number of students in your class. If in the United States, multiply 1600 by the number of students in your class. What is the result? Multiply by that by the number of residents of your town or city.

Have each student collect and weigh the trash they produce from one day. Multiply by 365 to find out how much trash each person will produce over one year. About how much trash will a person produce over a lifetime? Add the class totals together.

After the school lunch is finished, have students weigh the bags of garbage that are produced. How much garbage would this average over a week? A year?

Make a list of ways students might reduce their own personal production of trash.

To find out the impact of their own human footprint, students may enjoy taking the online quiz available at www.myfootprint.org

Environmental Education Standard: Give examples of human impact on various ecosystems

Environmental Education Standard: Form a personal plan for environmental stewardship

Math Standard: Determine measurement directly using standard units (metric) with these suggested degrees of accuracy: weight (mass) to the nearest 0.1 g

Math Standard: Determine measurements indirectly using estimation

WORDS TO KNOW

The following terms connect with the ScrapArtsMusic musical experience. Use these words in some of the following activities:

- Post the words around the room.
- Assign each student a word. Have them act out the word while other students guess the meaning. Alternatively, give students a list of the terms and see if they can select the term that is acted out.
- Have students work with a partner to define as many of the following terms as they can. Then put two pairs together, allowing students to add more definitions from the group knowledge base. Combine groups again if needed.

CHOREOGRAPHY The art of creating and arranging dances or movement.

COMPOSE To make up and write a piece of music.

CYMBALS Metal dishes that are clashed together as a pair or struck singly with a stick.

DRONE A continuous, sustained hum or buzz tone.

DRUM A percussion instrument characterized by a stretched skin or drum head that may be beaten, rubbed or scraped. Used by all world cultures.

DRUM HEAD The membrane stretched over the opening of a drum.

DRUM STICK An implement used for striking a percussion instrument, also known as a beater.

ENSEMBLE A group that performs together.

GONG A large metal plate hit with a mallet.

HOCKETING A way of playing in two parts, in which rests are introduced in one, coinciding with notes in the other. This technique is sometimes put into use on the Plankophone with several players playing the two parts.

KINETIC Of, relating to, or produced by motion.

MALLET A beater with a round ball on the end used on various percussion instruments.

MARIMBA A melodic percussion instrument consisting of tuned blocks of wood or metallic slabs cut or forged to different lengths, often with a resonator below each bar. Pitches span several octaves. ScrapArtsMusic calls theirs a Plankophone.

NOTE A tone of definite pitch.

PERCUSSION Musical instruments that you beat, scratch, rub, shake, twist, spin, rattle, roll, drop, throw, etc.!

PITCH Any of various standards that establish a frequency for each musical tone, used in tuning an instrument.

POLYRHYTHM Literally means "many rhythms". In common use, the term means two or more rhythms played simultaneously or against each other. Polyrythms can also be thought of as two different meters (time signatures) played against (or with) each other.

REED The sound-producing agent (of thin cane or metal) of various instruments.

RESONATOR The part of the instrument that amplifies the sound and makes it louder.

RHYTHM The division of time in music.

RIMS The point at which the outside edges of the drum meet the drum head.

ROLL To beat a drum in a continuous series of short blows.

TIMBRE The quality of a sound that distinguishes it from other sounds of the same pitch and volume. **TONE** The characteristic quality or timbre of a particular instrument or voice.

VOLUME The loudness or softness of sound.

Music Standard: Demonstrate extensive knowledge of the technical vocabulary of music

WRITING IDEAS

1. Discuss the importance of music in your life. What do you listen to? When? Where? How do you use music to rest, exercise, drive, play, relax or work?
2. How is music used in the celebrations and major events of our lives? Describe how music is used to mark important occasions. Why do you think people turn to music when they want to acknowledge a special event?
3. How has creativity influenced your own life? Do you consider yourself creative? In what ways? What sorts of creativity do you appreciate in others?
4. Write a persuasive speech to convince others to reduce, reuse and recycle.
5. Write a descriptive essay that explains how garbage is processed after it leaves your home.

English Language Arts Standard: Create or produce writing to communicate with different audiences for a variety of purposes.

English Language Arts Standard: Plan, revise, edit, and publish clear and effective writing

THE VOCABULARY OF GARBAGE

Repeat the prior activity with terms related to garbage, recycling and ecology: compost, toxic, decompose, hazardous waste, leachate, organic material, incineration, landfill, polystyrene, natural resources, renewable resources, dioxins, methane, ozone Environmental Education Standard: Explain and site examples of how humans shape the environment

Science Standard: Explain how some of the changes on the earth are contributing to changes in the balance of life and affecting the survival or population growth of certain species.

English Language Arts Standard: Apply sophisticated word meaning and word analysis strategies, such as knowledge of roots, cognates, suffixes, and prefixes, to understand unfamiliar words.

SCRAPARTSMUSIC NAMES

Once you invent something you get to name it! Everything that's ever been invented or created had to be named by someone.

What's in a name? What do the names tell you about the instruments? About the songs? About the person naming coming up with the names? How might you have named the instruments differently? Or do you think the names perfectly suit the instrument?

Have your students make an instrument (whether just drawings or actual sculptural instruments) and invite them to come up with names. Have them share the names with the class and explain why they chose the names they did.

ADDITIONAL LEARNING RESOURCES

BOOKS

Baschet, François. *Les Sculptures Sonores: The Sound Sculptures of Bernard & Francois Baschet*. Soundworld, 1999.

Hart, Mickey and Fredric Lieberman. *Planet Drum: A Celebration of Percussion and Rhythm*. San Francisco: Harper Collins, 1991.

Hopkins, Bart. *Gravikords, Whirlies and Pyrophones*. Florida: Ellipsis Arts, 1996.

Reck, David. *Music of the Whole Earth*. New York: Scribners, 1977.

Russolo, Luigi. *The Arts of Noises. translated by Barclay Brown*. New York: Pendragon Press, 1986.

Savage, Steve. *The Billboard Book of Rhythm*. New York: Billboard Books, 1987.

RECORDINGS

Live From Vancouver! Scrap Arts Music. Scrap Arts Production: 2012.

Phon. Scrap Arts Music. (Enhanced CD) Scrap Arts Production: 2001.

The Big Bang. Various Artists, Ellipsis Arts: 1994.

Gravikords, Whirlies and Pyrophones. Various Artists. Ellipsis Arts: 1996.

Planet Drum. Various Artists. Rykodisc: 1991.

* ScrapArtsMusic's work is available on iTunes and at CDBaby.com

INTERNET

ScrapArtsMusic website:
Videos, photos, bio, tour info and more!
www.ScrapArtsMusic.com

Bash The Trash Homepage: Ideas and information about instruments from trash.
www.bashthetrash.com

The New York Philharmonic Kidzone Instrument Lab:
www.nyphilkids.org/lab/main.phtml

Drummergirl Homepage: Dedicated to women and girls who drum.
www.drumsforgirls.ning.com

Experimental Musical Instruments Homepage: An extensive website with great links.
www.windworld.com

Dennis Havlena: Instructions for building low- cost, but nice sounding/playing folk instruments, including the hurdy-hurdy, kora, kalimba, tin whistle, banjo and bagpipe.
www.dennishavlena.com

Hosaphone: devoted to a form of flexible-tube trumpet.
www.hosaphone.com

Oddmusic: a source for unique, unusual, ethnic, or experimental music and instruments.
www.oddmusic.com

Harry Partch: An American Original; Corporeal Meadows is about the life and works of Harry Partch - iconoclastic American composer, theorist, instrument builder and raconteur.
www.corporeal.com

Percussive Arts Society: An extensive website devoted to percussive arts, with great links.
www.pas.org

Please also encourage your students to visit and interact with us on our Facebook Page!!
www.Facebook.com/ScrapArtsMusic



HOW ARE WE DOING?

We value your opinions as educators...

We would be most appreciative if you could spare a few moments to offer your unique perspective and invaluable feedback on the recent ScrapArts-Music presentation. Your insights enable us to refine our educational shows developed for schools.

*** RETURN THIS FOR A CHANCE TO WIN A CD***

Please let us know what you thought of the presentation by using a Scale of 1 (low) to 5 (high).

PRESENTATION CONTENT (OUT OF 5)

Level of artistry _____
 Audience/Student appeal _____
 Presentation value _____
 (costumes/instruments/etc.) _____

EDUCATIONAL CONTENT (OUT OF 5)

Educational value _____
 Rapport with students _____
 Relevance to students _____

AUDIENCE SUITABILITY & RECOMMENDATION

Primary _____
 Intermediate _____
 Middle/Junior _____
 Secondary _____

STUDY GUIDE (OUT OF 5)

Did the guide help you prepare for the presentation? _____
 Did you use it as follow up to the presentation? _____

ANY SUGGESTIONS FOR IMPROVEMENTS?

Please Submit Your Additional Comments
 (Please use additional paper if required)

INNOVATIVE PERCUSSION ON WHEELS



Canada's power percussion company ScrapArtsMusic features hyper-kinetic musicians and instruments sculpted from salvaged and recycled scraps.

By turning scrap into art, and combining arts into music, ScrapArtsMusic is an empowering show about creative thinking and transformation. It entertains with powerful percussion and suggests a new attitude toward tossed-away materials. Best of all, a high-voltage participation piece leaves students both energized and inspired.

Date of presentation _____

Your School Name _____

Your Name (optional) _____

Please fax back this form to 1-323-315-5191 or scan and email to info@scrapartsmusic.com

Also, please visit our Facebook Page at www.facebook.com/ScrapArtsMusic

*Please note that as many teachers as choose to may return this questionnaire about this presentation. It is NOT one per school. Thanks and good luck with our contest to win a CD!

NOTES

ZOELLNER ARTS CENTER MASTER MENTOR PROGRAM

MUSIC MASTER MENTOR PROGRAM WITH BAKITHI KUMALO | FEB - MAR 2020



HIGH SCHOOL AND MIDDLE SCHOOL STUDENTS -

Don't miss this special opportunity to study and perform live alongside Bakithi Kumalo on the grand Baker Hall stage at Zoellner Arts Center. Student composers and musicians can apply for several limited spots by submitting a 3-minute YouTube video showing off their musical talent. For full details go to www.zoellnerartscenter.org starting September 1st. All disciplines are encouraged to apply: strings, percussion, brass (including trumpet, saxophone, etc.) and vocals.

Students will receive training in technique, rehearsal and performance skills, in addition to composition and songwriting. Leave with life-long relationships and friendships, as well as portfolio materials for future endeavors. Bakithi Kumalo will perform live alongside student musicians from across the Lehigh Valley at Zoellner Arts Center Baker Hall stage.

MUSIC MASTER CLASS: FEBRUARY - MARCH 2020

MUSIC MASTER CONCERT - APRIL 5, 2020 @ 4PM

ZOELLNER ARTS CENTER SCHOOL MATINEES & FAMILY FRIENDLY PROGRAMING



SCRAP ARTS MUSIC - CHILDREN OF METROPOLIS

THUR. /FRI., OCT. 17/18 @ 10AM

Take industrial scrap, revitalize it with the arts of welding, sculpture, and choreography, merge with five extraordinary and athletic percussionists and create beautiful music. The result? A fast-paced, other-worldly performance that transforms "Scrap" into "art" and "arts" into "music". Educational outreach with STE(A)M tie-ins. <https://scrapartsmusic.com/> Study guide will be available. **BEST FOR GRADES 2 and up.**



BAKITHI KUMALO & THE GRACELAND TRIBUTE BAND

FRI., JAN. 24 @ 10AM

Grammy Award winning South African bass player Bakithi Kumalo - the bass player on Paul Simon's history-making, best-selling *Graceland* album - will perform the album's great music with the Graceland Tribute Band for a show that has passion, energy, and pulsing South African rhythms. www.bkumalobass.com Study guide will be available. **BEST FOR GRADES 5 and up.**



ERTH'S - PREHISTORIC AQUARIUM ADVENTURE

FRI., MAR., 13 @ 10AM

Jump in! Explore unknown ocean depths where prehistoric marine reptiles lived eons ago - and maybe live still today! Erth's actors, technology, puppets, science and imagination create an amazing visual experience that connects young audiences to the real science of paleontology. www.prehistoricaquarium.com Study guide available. **BEST FOR GRADES 2-6.**



CIRQUE MECHANICS - **SENSORY FRIENDLY SHOW**

SUN., DEC. 1 @ 4PM

42 FT - A Menagerie of Mechanical Marvels

At the center of every circus rests a 42ft ring full of thrills, laughs and excitement. This ring is transformed. Cirque Mechanics-style, with human-powered inventions such as a galloping metal horse and a rotating tent frame serving strongman, tumblers and aerialists. Cirque's playful presence invites all ages to dream and be amazed. **FAMILY & SENSORY FRIENDLY SHOW**

SUN., OCT. 27 @ 4PM



National Geographic Live: View from Above with Terry Virts, NASA Astronaut

Former International Space Station Commander Terry Virts helped to install the outpost's 360-degree observation module - and made good use of it, taking hours of video and hundreds of thousands of still images, which he shares in a first-hand account.



National Geographic Live: Ocean Soul with Brain Skerry

SUN., MAR. 29 @ 4PM

From the glacial waters of the North Atlantic to the balmy central Pacific National Geographic Photographer Brian Skerry shares the ocean's stories from his more than 10,000 hours underwater. Featuring images he captured while on assignment, Skerry offers a mesmerizing glimpse into the 'soul of the sea'.

ZOELLNER

ARTS CENTER • LEHIGH UNIVERSITY

■ GUEST ARTISTS

■ MUSIC DEPT.

■ DEPT. OF THEATRE

■ NOTATIONS

2019

- **NY Jazz Rep Orchestra** *Big Band Tribute* SAT SEP 7
- **LUVME** *September Songs Part I* SUN SEP 8
- **Momix** *Viva Momix* SAT SEP 14
- **The Princeton Singers** *Infinite Variety* SAT SEP 21
- **LUVME** *September Songs Part II* SUN SEP 22
- **Lori Goldstein** *Notations* WED SEP 25
- **Smart People** SEP 27-29, OCT 2-5
- **Stefon Harris + Blackout** SAT SEP 28
- **LUVME** *September Songs Part III* SUN SEP 29
- **Pink Martini** SAT OCT 5
- **Mystery Science Theater 3000 LIVE** THU OCT 10
- **The Ultimate Queen Celebration** *Starring Marc Martel* SAT OCT 12
- **Scrap Arts Music** *Children of Metropolis* **FAMILY-FRIENDLY!** FRI OCT 18
- **LU Choral Arts** *Fauré Requiem, Britten: Rejoice in the Lamb* FRI, SAT OCT 25, 26
- **National Geographic Live!** *View from Above with Astronaut Terry Virts*
SPEAKER SERIES **FAMILY-FRIENDLY!** SUN OCT 27
- **Ibram X. Kendi** *Notations* **MLK Keynote Speaker** TUE OCT 29
- **LU Jazz Rep Orchestra** *Featuring Eddie Palmieri* SAT NOV 2
- **Once** **BROADWAY** SUN NOV 3
- **Lee Upton** *Notations* THU NOV 14
- **The Broken Machine** NOV 15-17, 20-22
- **LU Jazz Orch., Ens., Funk Band & Combos** FRI NOV 15
- **Deanna Witkowski Trio** **UP CLOSE & ON-STAGE** SAT NOV 16
- **LU Wind Ensemble** *Tea and Crumpets: Music of the British Isles* SUN NOV 17
- **Scott Bradlee's Postmodern Jukebox** FRI NOV 22
- **Academy of Vocal Arts** *Le Nozze di Figaro* SUN NOV 24
- **Cirque Mechanics**
42ft—A Menagerie of Mechanical Marvels **FAMILY-FRIENDLY!** SUN DEC 1
- **LU Philharmonic** *Shostakovich, Mozart & Prokofiev* FRI, SAT DEC 6, 7
- **LU Choral Arts** *Christmas Vespers* SUN DEC 8

2020

- **Bakithi Kumalo & The Graceland Tribute Band** **FAMILY-FRIENDLY!** FRI JAN 24
- **Curtis Symphony Orchestra** *Beethoven & Sibelius* SAT FEB 1
- **LUVME** *February Songs Part I* SUN FEB 2
- **Brenda Shaughnessy** *Notations* TUE FEB 4
- **Hell's Kitchen Funk Orchestra** SAT FEB 8
- **Rennie Harris** *Funkedified* **FAMILY-FRIENDLY!** SAT FEB 15
- **LU Jazz Faculty** *The Great American Songbook* SUN FEB 16
- **LU Philharmonic** *11th Annual Concerto Marathon* FRI, SAT FEB 21, 22
- **Blithe Spirit** FEB 21-23, 26-29
- **LUVME** *February Songs Part II* SAT FEB 29
- **East Winds Quintet** *Generations* SUN MAR 1
- **Kate Racculia** *Notations* TUE MAR 3
- **Erth's Prehistoric Aquarium** **FAMILY-FRIENDLY!** FRI MAR 13
- **Sleeping Beauty** *Russian National Ballet Theatre* **FAMILY-FRIENDLY!** SUN MAR 15
- **LU Jazz Rep Orchestra** FRI MAR 20
- **Michael Jorgensen, Violin** *Partita* SAT MAR 21
- **Finding Neverland** **BROADWAY** **FAMILY-FRIENDLY!** SUN MAR 22
- **Writer's Panel: Inspiration and Invention** *Notations* THU MAR 26
- **LU Choir, Glee Club & Dolce** FRI, SAT MAR 27, 28
- **National Geographic LIVE!** *Ocean Soul with Photographer Brian Skerry*
SPEAKER SERIES SUN MAR 29
- **Matt Dusk** **UP CLOSE & ON-STAGE** SAT APR 4
- **LU Jazz Orch., Ens., Funk Band & Combos** FRI APR 17
- **Godspell** APR 17-19, 22-25
- **Compagnia Baccalà** *Pss Pss* SUN APR 19
- **LU Philharmonic** *Beethoven, Poulenc & Tchaikovsky* FRI, SAT APR 24, 25
- **LU Choral Arts** *Haydn: Lord Nelson Mass* FRI, SAT MAY 1, 2
- **LU Wind Ensemble** *By Request* SUN MAY 3
- **Sons of Serendip** SAT MAY 16



610.758.2787
ZOELLNERARTSCENTER.ORG

FREE EVENT PARKING
ATTACHED TO THE CENTER
PROGRAMS SUBJECT TO CHANGE

