

SAM2 STUDY GUIDE

Dear Educators,

The performers in SAM2, an educational production developed by Scrap Arts Music for BC students, are delighted to be coming to your school.

SAM2 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. SAM2 by Scrap Arts Music transforms **scrap** into art and **arts** into **music**.

SAM2 features exceptional performers with instruments beautifully sculpted from salvaged and recycled materials. Expect to see and hear a fast-paced show built around exhaust hose, artillery shells, and resonant recycled metals.

SAM2 is a low-tech, interactive experience suitable for presentation in gymnasiums that introduces students to green ingenuity, innovation and excellence. It features original percussion music composed specifically for SAM2 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.

SAM2 strives to open young minds to the art of the possible, encouraging creative thinking and fostering 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 the document.**

Enjoy the show!

PS Please send a copy of this Guide to ALL your teachers teachers so they can prepare and follow-up with their students.

We Appreciate Your Feedback

Your feedback can educate us about the ways the program is used and we are often able to implement some of your suggestions.

Also, if you'd like to send us any letters or drawings made by your students, find our contact info below.

We look forward to hearing from you!

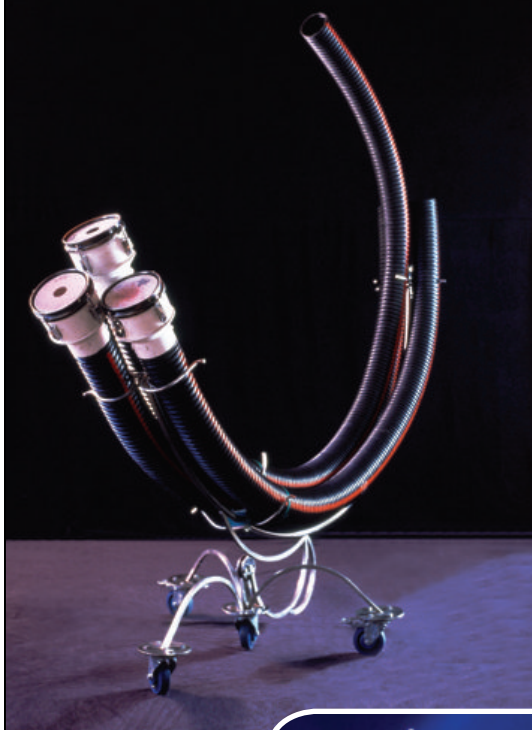
Contact Us

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A million acts of green...



Scorpion Drums



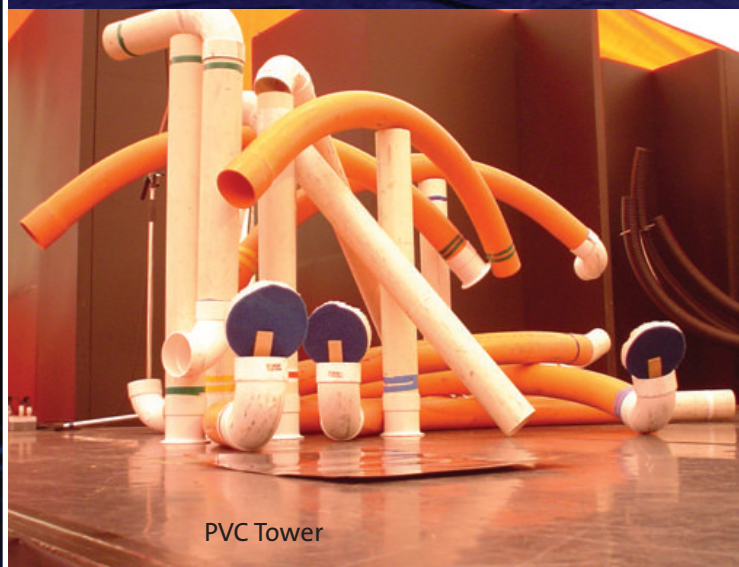
Chime Array
& Gong Array



Alumo-springs



The Mojo



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

Introducing SAM2!

SAM2 is innovative percussion theatre featuring three hyper-kinetic performers who play amazing instruments skillfully crafted from salvaged and recycled materials. SAM2 is directed by the founder of Scrap Arts Music, multi- talented percussionist Gregory Kozak. Gregory takes the surplus waste of North American industry and designs and builds articulated musical instruments from materials such as exhaust hoses, artillery shells and broken monkey bars. Providing a groove-based fusion of world music traditions and 21st century sounds, these industrial scraps become the basis for a dynamic, choreographed musical performance suitable for all ages. Some of SAM2's performers include Gregory, Alex, Chris, Malcolm and Kristen.

SAM2's 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 theatre
- Alternative ideas about what constitutes a musical instrument

What to Expect

SAM2's educational show is approximately 45 minutes long. 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.

Sneak a Peek

Before attending the show, visit [Scrap Arts Music's](#) website to watch videos of the group, listen to audio, see some of their instruments or learn more about the musicians.

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. SAM2 uses original instruments made from recycled materials. Imagine going through a junk yard, a recycling centre or trash. What types of materials might you find? How might you put odd materials together to produce sounds?
4. Discuss behavioural 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

About SAM2's Instruments

SAM2 uses an array of original and creatively designed musical instruments made from industrial castaways 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

Naming Your Creation

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.

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 & 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

Create Your Own Instruments

SAM2's instruments are made up of just about any found object. Gregory, 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.

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.

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”

SAM2’s musicians are highly creative. Not only do they make instruments from recycled junk, but they use their imagination to figure out ways to use 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 future world problems.

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

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 out Vancouver's handy guide](#):

British Columbia Green Games

BC 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: bcgreengames.ca Take steps to initiate this program at your school. Over 20,000 prizes will be awarded!

Music Then and Now

SAM2's music — generated by invented instruments from recycled materials — 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 SAM2 different from other musical productions 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 SAM2’s instruments different from traditional percussion instruments?
4. What kinds of materials does SAM2 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 SAM2 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

Theatre 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.

Words To Know

The following terms connect with the SAM2 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. We use this technique 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 made of tuned planks of wood or metallic slabs cut or forged to different lengths, often with a resonator below. Pitches span several octaves. We call ours 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. Polyrhythms 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

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

Send Us Your Students' Creations

Send digital images of your student's creations to us [by email](#) and we will share your creative ideas with the world! We will post the creations with whatever credits YOU tell us (i.e. whether just “Mrs. Smith's 5th grade class”, or “Bell Elementary”, etc.)

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Let us know if you are interested in doing a deep dive into how to make instruments with your students from the materials around us.

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.



<http://www.ScrapArtsMusic.com>