

**L'ARSENAL À MUSIQUE**

[www.arsenal.ca](http://www.arsenal.ca)

The sound factory

# Teacher's guide



To help you prepare for this show, we have developed a teacher's guide which, we hope, will become a precious "instrument" in bringing the children to a better understanding of all of the musical styles they will see and experience.

We thank you for your collaboration!

# **THE DAY OF THE PERFORMANCE**

## **Arrival of L’Arsenal à musique**

The team will arrive approximately 1 hour 30 minutes prior to the performance. It is indispensable that the team be met upon their arrival by a school representative.

## **Personnel required for the unloading and loading of material**

The assistance of two adults or a small group of students to help unload before the show and load after the show would be appreciated.

## **Presentation space**

At the artists’ arrival, the availability of the janitor is necessary to answer any technical or practical questions (electricity, ventilation, lighting, etc.).

Please make available one well-lit room, equipped with a table, chairs and bottled water where the artists can change and safely leave their personal effects.

All other activity in the performance space must be suspended during setup and strike.

## **Before the performance**

We recommend that the school principal or the person responsible for the activity meet with l’Arsenal’s sound technician 15 minutes before the children enter the room.

Please assign a staff member to meet the artists, answer any questions they may have and inform them when the audience is seated and the show may begin.

## **During the performance**

Please ensure that bells are turned off.

Please discourage staff and students from entering or leaving the performance area.

The audience should be seated on the floor.

For everyone's benefit, please observe the audience maximum of 200 students.

**Length of show :** 50 minutes

**Length of strike :** around 1 hour

## **SOME WAYS TO PREPARE THE CHILDREN FOR THE UPCOMING PERFORMANCE :**

- ☞ Discover the Baschet sound sculptures on pages 4 and 5.
- ☞ Build an acoustic instrument in the spirit of the sound sculptures, as shown on pages 12, 13 and 14.

### **RESEARCH THE TOWN OF TADOUSSAC AND THE BELUGA WHALES:**

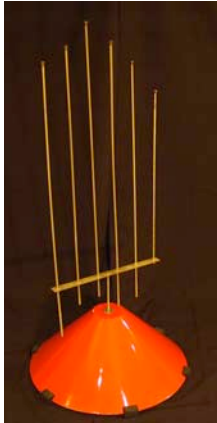
- ☞ Depending on the students' age and grade (4, 5 or 6), conduct geographical research into the town of Tadoussac, the Saguenay region and the St-Lawrence River.
- ☞ Research the Beluga Whale, its habits, its migration and their annual return to the mouth of the Saguenay.
- ☞ Transform your school gym into a concert hall, decorating it according to the imagination and the creativity of the students.

### **AFTER THE SHOW:**

- ☞ Draw the house of François and Bernard Baschet.
- ☞ Draw, from memory, the Baschet sound sculptures and try to remember the 'domestic' origin of the instruments.
- ☞ Draw the traditional percussion instruments from the show.
- ☞ Describe the differences between the Baschet sculptures and the traditional percussion instruments.

## THE INSTRUMENTS USED DURING THE PERFORMANCE:

### THE BASCHET SOUND SCULPTURES



The **Candlestick** : a vertical keyboard with 6 steel rods, attached at fixed intervals to a steel support, which in turn is attached to a fibreglass cone.



The **Crystal** : a keyboard with 25 glass rods attached to a sheet of Duralumin on steel rods. The sheet is attached to a fibreglass cone, along with a steel spring. To be played with wet hands.



The **Spring** : A long vertical steel spring at the end of which is a cardboard cone shape. The spring is attached to a steel stand. The spring moves back and forth with the direction and intensity of the person playing it.



The **Double Spring**: a horizontal keyboard with 6 steel rods of varying lengths, positioned from the longest to the shortest; one steel sheet, on the horizontal, centre is not aligned with the centre of the instrument; two steel springs. Each of these elements is attached to a steel support, which is attached to a fibreglass cone.



The **Oven grill**: a keyboard with 25 steel rods of the same length, attached close together. They all go through a steel support, which is attached to a fibreglass cone.



The **Whistler**: a series of bars made of Duralumin, of varying lengths. Long, high-pitched sounds.



The **Disk**: a disc made from reinforced steel, attached off-centre to its support. The sound is more resonant as you go away from the centre.

## **THE OTHER INSTRUMENTS USED DURING THE PERFORMANCE:**

### **SURDO**

In the complexity of the Brazilian Samba's structure, Surdos play a very important role by carrying on the foundation of the rhythm section and reflecting the "clave" and all the Samba language.

It's a two-headed large cylindrical drum made with stainless steel or wood shell. The heads can be calf-skin or plastic. Surdos are traditionally used in Escolas de Samba where a large ensemble (Bateria) counts around 25/35 elements with drums of all the above kind and size.



### **Playing techniques**

For *samba-enredo* (Rio-style Carnival samba), surdos are played with one mallet damping the head with the other hand.

There are four basic strokes played on the Surdo: strike with the left hand with the left hand resting on the head, strike the surdo with the stick (closed tone) strike the surdo with the stick (open tone) strike the rim of the drum with the stick. The left hand may be left on (closed) or off (open) the head.

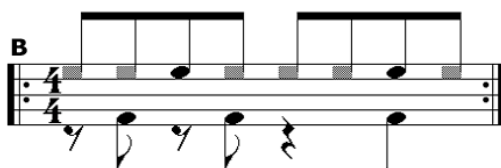
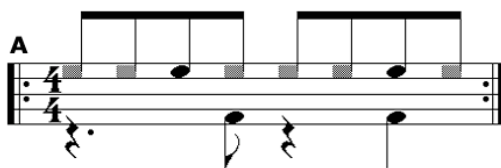
## CAXIXI

Caxixi (pronounced Ka-shee-shee) is a musical instrument of ancient African origin that became popular in Brazil as a companion to the Berimbau, an African musical bow with a hollow gourd as a resonator, used in the dance-game of Capoeira.

Because of its lively sound, the Caxixi was originally used to call forth the presence of the enchanted spirits and also to scare all evil away. Caxixi is a reed basket, woven by hand, with a hard gourd skin bottom filled with special seeds. Shaken, the seeds hit the hard gourd skin, producing a distinctive sound. Caxixi can be used as a rattle to drive the beat and also in pairs to produce intricate sounds and rare textures.



shake the caxixi on  
the side (like a tube shaker)



## AGOGO BELLS

Agogo bells are pairs of bells joined by a curved metal rod. They are shaped much longer than a regular cowbell and generally tuned in thirds.

The Agogo is played with a stick held in the right hand while the left hand hold the instrument and can also squeeze the two bells together producing a "chick" sound. The stick can be made from metal or wood.



### A very popular agogo score:





## OCEAN DRUM

Picture yourself on a beautiful beach, absorbing the sounds of the ocean waves, relaxing and breathing deeply.



The Ocean Drum is a wonderful and magical instrument that can be played as both a frame drum and can recreate the sound of the ocean waves crashing against the shore.

To create the waves simply rock the drum from side to side and let the metal pellets roll across the drum surface.

This drum is commonly used as a tool of relaxation and meditation as well as a percussion hand drum.

## DJEMBE

A djembe (pronounced *JEM-bay*) is a skin shaped like a large goblet and is meant to be played with your bare hands. The djembe originated in Africa where it became an integral part of the area's music and tradition.

The djembe is a secular drum. It is found in all of West Africa, where it is one of the most common instruments.

The djembe is said to contain three spirits: the spirit of the tree, the spirit of the animal of which the drum head is made, and the spirit of the instrument maker. Properly crafted djembe drums are carved in one single piece from hollowed out trees called Dimba or Devil Wood. In earlier times and still in some rural areas djembe were used to send messages over long distances.

A master djembe player is referred to as a *djembefol*



## **THE BASCHET SOUND SCUPLTURES**

As their name suggests, the “Sound Sculptures” are pieces of art that produce sound, invented by Bernard and François Baschet, two internationally renowned French artists. Since 1952, the brothers have pioneered a new art form that marries shape and sound.

An “instrumentarium” of 14 instruments destined for the musical education of children was developed from 1975 to 1983 by Bernard Baschet.

Bernard Baschet and his partners created “little sound structures” that are simple to play, adapted to a child’s physical abilities. The children learn to work with sound, to listen to the sounds, to listen to themselves play, to listen to others. They structure their listening. By playing freely, they learn to structure their thought, as with building sets and games.

From an educational point of view, the Baschet instrumentarium comes out of a creative pedagogical approach, one that emphasizes the child’s natural spontaneity and creativity, as well as an openness to different musical cultures and the combination of artistic disciplines.



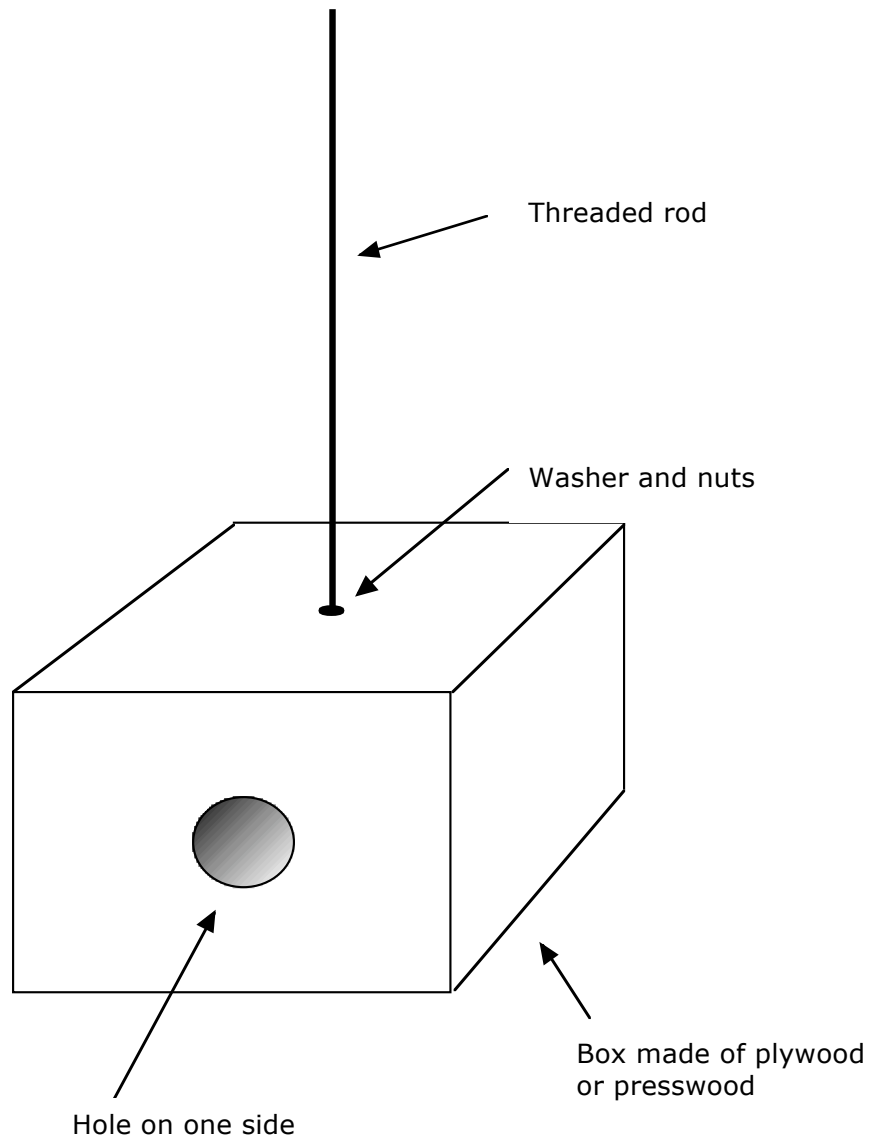
## **WHAT IS THE ACOUSTIC PRINCIPLE OF THESE INSTRUMENTS?**

The Baschet sound sculptures work just like Meccano. They are made up of interchangeable parts, such as metal rods and sheets, plastic membranes to be inflated, fibreglass and stainless steel cones, piano cords, springs, etc. Each combination of these different parts produces a new sound. This is how the Baschet brothers proceeded, by adding or taking away different parts, to experiment with these new instruments and their distinctive sounds.

The brothers' contribution to the world of musical instruments is remarkable, as their sound structures constitute one of the rare examples of acoustic innovation in this field in the 20<sup>th</sup> century.



## A home-made resonator!

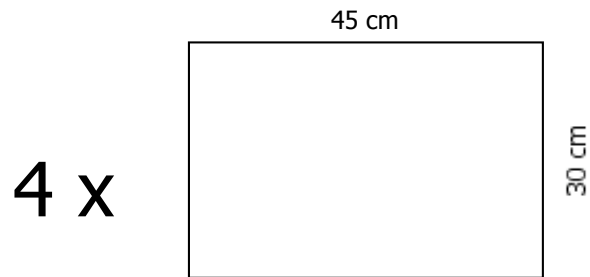


A long metallic threaded rod passes through a box. When you hit the rod, it vibrates. The vibration is amplified by the sound box, a bit like the sound of the strings on a guitar.

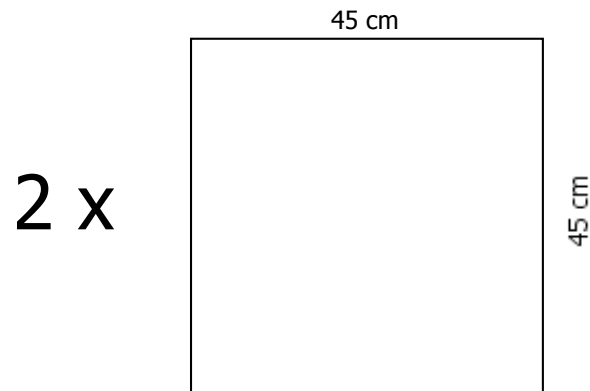
The size of the box may vary, as can the length and the diameter of the metal rod. Different sizes will produce different sounds. You can even use a ready-made box, and make the holes you need.

Experiment, and have fun!

## Materials

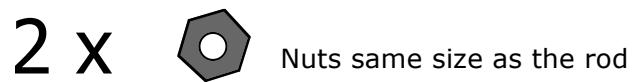
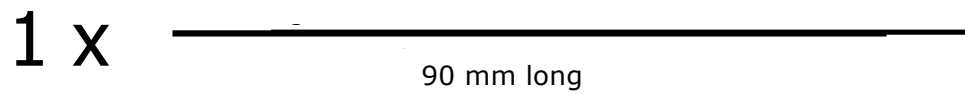


Plywood or presswood, 5mm thick



## Hardware

Threaded rod, about 5mm thick



## Building your instrument

### Step 1:

Cut the pieces of plywood to the required dimensions.

### Step 2:

Using a jigsaw or a carpenter's punch, make a hole about 3-4 inches across in one of the sides (rectangular pieces), drawing diagonal lines to help you find the centre.

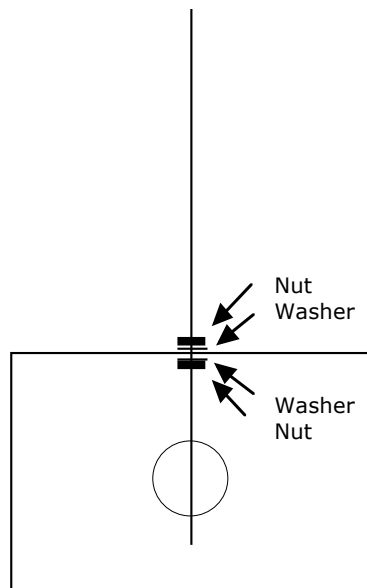
Using a drill, make a hole for the metal rod in the centre of the top of the box (square piece).

### Step 3:

Put the box together, using nails, screws or wood glue.

### Step 4:

With washers and nuts, pass the threaded rod through the hole, making sure it doesn't touch the bottom of the box, allowing it to vibrate freely.



***Voilà!***

You've made a musical instrument, where the box serves as a resonator for the metal rod!

## The shows from l'Arsenal à musique

**L'arsenal à musique** L'Arsenal à musique's mission: to introduce concert music to a broad audience, and especially to young people through bold and innovative interventions, performances and concerts; and to develop strategies for initiation to the arts within the educational curriculum.

### The Little Prince

Musical inspired by *The Little Prince* by Antoine de Saint-Exupéry. Original score by Canadian composers Denis Gougeon and Yves Daoust

*Planet Baobab* is an inspired fusion of original music, lighting and visual effects. This musical production, with its fantastical imagination and its mystery and emotion, is a wonderful introduction to Saint-Exupéry's little prince and the characters that inhabit the world of his moving, timeless, universal and unforgettable story.

Winner of an Opus award (2000) for best production for a young audience.

**For age 6 and up— 55 minutes**

### Alice

A musical inspired by *Alice's Adventures in Wonderland* by Lewis Carroll. Original score by Canadian composers Denis Gougeon and Yves Daoust

The character Alice , interacting with a series of animated passages, invites us to follow her along the winding path of her imagination. The music is the starting point for this young adventurer as she meets the Cheshire Cat, the Rabbit, the Mad Hatter and a host of other characters from this classic English work.

**For age 8 and up — 55 minutes**

### The Carnival of the animals

A puppet show to the music of Camille Saint-Saëns.

The circus is in town, but Octave and Mandoline don't know what to do – all of the animals have disappeared!

“Children, can you help us find them?”

And so the search begins, to the fantastical tune of the famous French composer's *Carnival of the Animals* , as we scramble after the lions, roosters and hens, the mules, turtles and elephants, the kangaroos... and the piano player!

A musical odyssey filled with surprises, a marvellous work inhabited by clowns and puppets, both big and small, for the sheer delight of the youngest audience.

**For ages 4 to 8 — 50 minutes**

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