

THE SCIENCE OF SOUND by Symphoria

MUSICAL ACTIVITIES

To enhance your concert experience

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•Activity directly related to this concert-for most ages:

**CONCERT QUILT**

(Collaborate with your art teacher?)

**Materials needed:**

- 1) One large piece of paper (11" x 14"?)
- 2) Drawing utensils such as crayons, markers or colored pencils.

**Steps:**

- 1) Fold paper in half lengthwise and then in half again creating four rectangles. Repeat until there are eight equal squares. OR fold in half lengthwise and then in thirds to create six equal squares.

**BEFORE THE CONCERT**

(Numbers after the titles indicate location on the video)

- 2) **Mula Sem Cabeça**-52:12 Choose one of the squares and draw your interpretation of the character represented in the folklore from the Brazilian Rain Forest of a headless mule/horse that appears during a full moon inside that square. The animal is said to be brown or black and has silver horseshoes that produce LOUD hideous trotting. Despite being headless the animal can still neigh and there is fire coming from the area where the head should be! This Brazilian folklore character inspired Ney Rosauero to compose Mula Sem Cabeça which you will hear played during the Symphoria concert. After you draw your picture, you will have created your first quilting square. When you listen to the performance, look at your drawing and see if your picture matches what you hear! Do you need to add anything?

3) **Curupira from Mito Brasilieros**-1:03:39 Another Brazilian folklore characters is a Curupira which are described as a dwarf or an elf with red hair and backwards-facing feet to confuse hunters into following them the wrong direction. You might have actually seen a Curupira before if you have watched Harry Potter movies as a group of Curupiras were used as the mascots for the Brazilian National Quidditch team! Choose another square and draw your interpretation of what you think a Curupira looks like. When you hear the performance of this piece, look at your drawing and see if your picture matches what you hear! Do you need to add anything?

### **DURING THE CONCERT**

Choose 4 or 6 more of the following pieces of music to draw how the music makes you feel to complete your CONCERT QUILT. You may want to listen to each piece 2-3 times to have time to draw your response, OR, listen and watch the musicians play the piece the first time, and follow that by listening and drawing how the music makes you feel as you listen to them again. When you have completed the quilt, smooth out your CONCERT QUILT and see if you can remember which quilting square represents which piece. Listen to the pieces again and match up what you see and hear to the square you created to represent each piece.

4) **Cartoon Music**-37:36 This piece was written by Symphoria percussionist Ernest Muzquiz. It gives the percussion section an opportunity to showcase their skills with mallet/keyboard percussion instruments. Draw how this piece makes you feel or what it makes you think about. What colors will you be inspired to use? Will you draw shapes? Will you draw your favorite cartoon character? After you draw your reaction, listen to the piece again to see if you need to add anything to this quilting square.

5) **Auburn Run-Out**-42:00 Also written by Ernest Muzquiz, this piece focuses on percussion instruments known as membranophones which are instruments which produce sound by way of vibrating a stretched

membrane (the drum head). Drums are membranophones. Draw how this piece makes you feel or what it makes you think about. What colors will you be inspired to use? Will you draw shapes? Will you draw your favorite drum? After you draw your reaction, listen to the piece again and see if you need to add anything to this quilting square.

6) **Latin Capriccio**-48:45 The focus of this piece is also on drums or membranophones. To make the music sound like it is from Latin American many hand held instruments are added. Draw how this piece makes you feel or what it makes you think about. What colors will you be inspired to use? Will you draw shapes? Will you draw your favorite drum or other instruments you see? Will you draw people dancing? After you draw your reaction, listen to the piece again and see if you need to add anything to this fun quilting square.

7) **Manzanilla**-57:10 The focus of this piece is on Idiophones which are instruments whose bodies vibrate to produce the sounds we hear. This is very different from membranophones that make their sound by being hit (such as drums) aerophones that uses airflow to make the sounds (such as wind instruments) and chordophones which uses bows to create the vibrations to create their sounds (such as string instruments). Draw how this piece makes you feel or what it makes you think about. What colors will you be inspired to use? Will they be different colors than you have used so far? Will you draw shapes? Will you draw your favorite instruments that you see? After you draw your reaction, listen to the piece again and see if you need to add anything to this quilting square.

8) **Ballad**-1:00:48 This piece sounds VERY different than the other pieces. What makes the piece sound different? Is it the combination of instruments that are being played? Is it how loudly or softly the performers are playing? Is it the rhythm? Draw how this piece makes you feel or what it makes you think about. What colors will you be inspired to use? Will they be lighter colors than you have used so far? Will you draw shapes? Will you draw your favorite instruments that you see? Will you draw clouds or something

soft or sleepy? After you draw your reaction, listen to the piece again and see if you need to add anything to this quilting square.

9) **Sounds of Africa**-1:06:55 Composer Michael Udow uses a wide variety of sounds from Africa in this final piece of the concert. It features a wide variety of percussion instruments which makes this piece sound completely different than the Ballad. Draw how this piece makes you feel or what it makes you think about. What colors will you be inspired to use? Will they be brighter colors than you have used so far? Will you draw shapes? Will you draw your favorite instruments that you see? After you draw your reaction, listen to the piece again and see if you need to add anything to this quilting square.

10) After you have filled in all of your quilting squares, listen to the concert again and find the square that you drew for each piece. Can you remember which square goes with each piece? Do you need to add any final touches to your quilt? When you are done you have your very own MUSIC QUILT of the Symphoria concert!

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•**MEMBRANOPHONES** are instruments that create sound primarily when **the membrane (the drum head) is struck directly**, such as through bare hands, beaters or keyboards. Drums are membranophones. Here are some of the membranophones used for this concert:

- Timpani
- Snare Drum
- Tom Toms
- Bass Drum
- Bongos
- Congas
- Timbales

## **MEMBRANOPHONES activity for kids of All Ages**

### **Make Your Own Drums**

#### **Materials needed:**

- One medium sized round shaped balloon of good quality for the top of every drum you plan to make. (Tubular balloons won't work well)
- Containers such as drinking glasses, jars, cans, sturdy plastic cups etc. for the body of the drum.
- Two Chop Sticks, or pencils etc. for the drumsticks.
- Scissors
- Medium rubber bands (optional)

#### **Steps:**

- 1) Cut the bottom part of the balloons off with the scissors leaving about 1-1.5" of the top part.
- 2) Stretch the top part of balloon over the top of the container. The tighter you stretch the balloon the higher the pitch. This serves as the membrane.
- 3) Secure the balloon with a rubber band around the rim of the container if needed.
- 4) Use whatever "sticks" you chose to hit the top of your drum!
- 5) If you make several drums it is possible to create a simple tune by varying the tightness of the balloon and size of the containers. Have fun!

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•**IDIOPHONES** are any musical instrument that creates sound primarily by causing the vibration of **the instrument itself**. Most percussion instruments that are not drums are idiophones. Here are some of the Idiophones used for this concert

Orchestra Bells  
Xylophone  
Vibraphone  
Marimba  
High Hat Cymbals  
Cowbell  
Claves  
Gyro-Scraper  
Cymbals  
Triangle  
Glockenspiel  
Rainstick

## **IDIOPHONE activity**

### **Make Your Own Rainstick!**

#### **MATERIALS NEEDED:**

- Paper towel roll (or cardboard tubes)
- Construction Paper
- Scissors
- Tape
- Aluminum foil
- Rice (1/4 cup uncooked)
- Ribbon, stickers etc. to decorate (optional)

## STEPS:

1. Use the end of your cardboard tube to trace two circles (about 5" apart) on the construction paper.
2. Cut out two circles about 3" outside of the circles you traced.
3. Cut slits around the circles that you traced.
4. Lay the circle on one end of the tube and tape the slits around the end of the tube to seal it off.
5. Pull out a large piece (about twice as long as your tube) of aluminum foil and roll it lengthwise to create a "foil snake"
6. Create a spiral with the aluminum foil "snake" by wrapping it around the outside of the cardboard tube.
7. Place the aluminum foil inside the cardboard tube.
8. Pour about 1/4 cup of uncooked rice inside the tube.
9. Place the other circle on the other end of the cardboard tube with tape (as above)
10. Decorate the tube with ribbons or stickers etc.
11. Turn your rainstick in all different directions and hear the soothing sound of rain!



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•To learn more about instruments played in a symphony orchestra, refer to the Education section of the Symphoria website. There are also instrument demonstrations found at the beginning of the concert video.

More images and other information about symphonic instruments is available online by googling:

[Instruments of the Modern Symphony Orchestra - Wikisource ...](#)

[https://en.wikisource.org/wiki/
Instruments of the Modern Symphony Orchestra](https://en.wikisource.org/wiki/Instruments_of_the_Modern_Symphony_Orchestra)

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