

EVERYDAY MUSIC

PBS WESTERN RESERVE

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IN TUNE: EVERYDAY MUSIC is a K-3 music series designed for both classroom and home instruction. Hosted by Jake Kouwe and Esther Fitz, both seasoned musicians with an extensive background in music performance, this series explores the world of music through live demonstrations and interviews with musicians from the Chardon Polka Band and members of Ohio youth orchestras and symphonies. Musical concepts will be presented in a fun and engaging manner, with practical suggestions for making music accessible and enjoyable at home.

Lesson Plans

- 1. Sound & Vibration
- 2. Woodwinds
- 3. Strings
- 4. Brass
- 5. Percussion
- 6. Bands & Ensembles

Credits

Teacher Guide

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Special Thanks

The Chardon Polka Band; Snowbelt Musical Arts Association; Chagrin Valley Music; Pfabe's Music Academy, Painesville, Ohio; Fine Arts Association, Willoughby, Ohio; Samantha Puterbaugh, Music Teacher, Chardon Local Schools; The Mucciarone Family; The Craemer Family

Funding

This series was funded by the Ohio Broadcast Educational Media Commission (BEMC) and the Ohio Department of Education and Workforce.

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Sound and Vibration

Join musicians Jake and Esther in IN TUNE: EVERYDAY MUSIC as they explore the science behind sound. Through fun demonstrations and real-world examples, kids learn how vibration creates sound, and how sound becomes music. Get ready to listen, learn and make some noise!

Ohio Standards

- K.2RE Explore a variety of classroom instruments (metals, skins and woods).
- 1.2RE Explore selected musical instruments aurally and visually.
- 2.2RE Identify selected musical instruments visually and aurally.
- 3.2RE Identify the four families of orchestral instruments visually and aurally.

Underlying Standards

- K.1CO Experience how music communicates feelings, moods, images and meaning.
- 1.1CR Improvise short rhythmic and melodic patterns using a variety of sound sources.
- 2.1CO Identify how music communicates feelings, moods, images and meaning.
- 3.1CO Express how elements of music communicate feelings, moods, images and meaning.

SOUND & VIBRATION

Watch the video "Sounds and Vibration."

Watch

Vocabulary

Vibration — A fast back-and-forth movement that makes sound

Sound waves — Tiny vibrations that travel through the air, like ripples in a pond, and allow us to hear sounds

Air molecules — The tiny, invisible "building blocks" that make up air, which include particles of oxygen and nitrogen

Found sounds — Everyday sounds heard in your environment

Discussion Questions

Use the following questions as a guide for a class discussion after viewing the video:

1. Take a few moments to sit in silence, what sounds do you hear around you? These are known as found sounds.

Answers may vary.

2. Why do you think sounds produced far away are softer than sounds made close to us?

Answer: The energy of the sound is spread out over a greater distance and as it travels over a greater distance, energy is lost.

3. When tapping or plucking three different sized objects (e.g., bowls, rubberbands, drums), why do the vibrations sound different?

Answer: The frequency of the vibrations produces different sounds because different objects vibrate in unique ways.

Read-Aloud Suggestions

- "Sounds All Around Us" by Wendy Pfeffer recommended for Kindergarten through first grade
- "Clang! Ernst Chladni's Sound Experiments" by Darcy Pattison — recommended for second and third grade





- Bowl
- Plastic wrap
- Rubber band
- Sand or salt
- 1. Wrap plastic wrap tightly over a bowl and secure with a rubber band.
- 2. Place sand or salt on the plastic wrap.
- 3. Make sounds near the bowl (such as clapping, shouting or playing an instrument) to see the sand or salt vibrate. Be careful not to touch the bowl or surface the bowl is on. Observe the movement of the sand or salt. This is because sound is a vibration! Try using a different voice or instrument to see if the vibration changes.





- Metal fork or spoon
- Yarn
- 1. Tie a metal fork or spoon to the center of a long piece of yarn, making sure the yarn is long enough to reach from both ears to the chest or stomach. The fork or spoon should be tied to the center of the piece of yarn.
- 2. Tuck the ends of the yarn into ears and tap the fork or spoon on an object (e.g., chair).
- 3. You will hear a sound like ringing in your ears.
- 4. Observe how the sound is very noticeable to the person holding the yarn to their ears, but not very noticeable to observers.





- Video of Tan Dun's "Water Concerto"
- 1. Watch a performance video of Tan Dun's "Water Concerto" to see vibrations in water being used as a musical instrument.





Woodwinds

Hosts Jake and Esther highlight the world of woodwind instruments and the vibrations that bring them to life. Young musicians and a professional saxophonist share how playing woodwinds, such as the flute, clarinet and saxophone, helps them connect and express themselves through music.

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- K.2RE Explore a variety of classroom instruments (metals, skins and woods).
- 1.2RE Explore selected musical instruments aurally and visually.
- 1.3RE Identify elements of music using developmentally appropriate vocabulary.
- 2.2RE Indentify selected musical instruments visually and aurally.
- 2.3RE Identify and apply elements of music using developmentally appropriate vocabulary.
- 3.2RE Identify the four families of orchestral instruments visually and aurally.
- 3.3RE Distinguish elements of music using developmentally appropriate vocabulary.

Watch

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WOODWINDS

Watch the video "Woodwinds."

Vocabulary

Keys — Finger buttons on instruments that are used to manipulate the air flow and change the pitch/sound

Embouchure — The way the player shapes their lips and facial muscles to produce sound on a wind instrument

Embouchure plate — The specific part of the flute's headjoint (top of the flute) where the player blows to produce sound

Cane — A type of grass called Arundo donax, a fibrous, perennial plant

Single reed — A thin strip of material, often made from cane, that vibrates when air is blown through it, creating sound in instruments like clarinets, saxophones, oboes, and bassoons

Double reed — A type of reed consisting of two pieces of cane that vibrate against each other, used to produce a sound in various woodwind instruments including the oboe, English horn and bassoon

Free reed — A type of reed that vibrates freely within a frame, used in instruments like accordions and harmonicas

Discussion Questions

Use the following questions as a guide for a class discussion after viewing the video:

1. A piccolo is a small version of a flute. Which instrument will sound higher, the piccolo or the flute? Why do you think this?

Answer: The piccolo sounds higher because the piccolo is nearly half the size of the flute and is made to sound an octave (eight pitches) higher than a flute.

2. How many types of saxophones do you think are used today?

Answer: At one point there were 14 different kinds of saxophones, but there are typically six saxophones used by musicians. Ranging from the highest to the lowest sounding saxophone, they are the sopranino, soprano, alto, tenor, baritone, and bass. 3. A recorder is part of the woodwind family. After looking at an image of a recorder and a clarinet (include images of the back of the mouthpiece of each instrument as well), does the recorder use a reed like most woodwind instruments?

> Answer: No it does not use a reed. Instead, recorder players blow air across the "fipple," the sharp, angled edge of the mouthpiece.

4. Harmonicas are also woodwind instruments because they utilize reeds. After looking at an image of a harmonica (outside and inside view of reeds if possible), how many reeds do you estimate are used in a standard sized harmonica, which has 10 holes?

> Answer: A ten-hole harmonica uses 20 reeds. Behind each of the 10 holes are two chambers, one for blow notes and one for draw notes, each containing a reed.

*If possible, search for videos where instruments such as the harmonica and recorder could be viewed to help students become more familiar with the instruments.

Read-Aloud Suggestions

- "Finley the Flute" by Claire Geddes
- "The Story of the Saxophone" by Lesa Cline-Ransome
- "Lazlo Learns Recorder" by Vicky Weber





This activity is from the demonstration featured in the video.

- Plastic water bottle
- 1. Uncap a water bottle and blow (form flute embouchure) across the opening.
- 2. Drink some water and repeat step above. Notice the difference in the sound. Does it sound higher or lower?



Musical Four Corners

Materials

- Posters of a flute, clarinet, oboe and saxophone
- Facts printed on pieces of paper (on following pages)
- Listening examples of each (optional)
- 1. Place images of four woodwind instruments around the classroom.
- 2. Randomly choose one of the facts listed in the following pages and read to students.
- 3. Students move to the instrument photo that they feel matches the fact.
- 4. Challenge round: Play a listening example of each instrument and have students stand by the photo they feel matches the sound.

Please note: The facts are geared towards second and third grade students, but the activity can be modified for younger students by giving choices of instruments or simplifying the facts.





Woodwind Facts

Flute

I am a woodwind that doesn't use a reed.

While I am made of metal now, I used to be made of wood.

The piccolo is a much smaller and higher sounding version of me.

Clarinet

I have a black cylindrical body and use one reed.

I have a flared bell at the bottom of my body.

My nickname is the licorice stick.



Woodwind Facts



I have a black cylindrical body and use a double reed.

I am considered to be more challenging to play than other woodwind instruments.

I am the instrument that orchestras use for tuning. When I play an "A," all the other instruments must match my pitch.

Saxophone

I have a brass body and I use one reed.

I was invented by Adolphe Sax.

I come in different sizes that are known as soprano, alto tenor and baritone.



- Soda straws
- Scissors
- 1. Flatten one end of a plastic straw and cut angles into the flattened end of the straw to make a point.
- 2. Bite down on the cut end of straw to push the two points (the double reed) closer together.
- 3. Insert the straw instrument into mouth just below the cut edge of the straw.
- 4. Experiment with the sound of the straw instrument by cutting small sections off the bottom of the straw. Ask students to identify what happened to the sound each time a cut is made.
- 5. If time and resources permit, assist students in making their own straw instruments.







Jake and Esther teach kids about stringed instruments and how they make sound through vibration. Meet young violin and guitar players, jam with a professional banjoist, and discover fun ways to create your own stringed instruments at home.

Ohio Standards

- K.2RE Explore a variety of classroom instruments (metals, skins and woods).
- 1.2RE Explore selected musical instruments aurally and visually.
- 1.3RE Identify elements of music using developmentally appropriate vocabulary.
- 2.2RE Identify selected musical instruments visually and aurally.
- 2.3RE Identify and apply elements of music using developmentally appropriate vocabulary.
- 3.2RE Identify the four families of orchestral instruments visually and aurally.
- 3.3RE Distinguish elements of music using developmentally appropriate vocabulary.



Watch

Vocabulary

Strum — To play a stringed instrument, such as a guitar, by brushing the strings with the fingers or by using a musical pick

Shred — To play an electric guitar very fast and with a lot of skill/talent

Pluck — To pull and release a string on a musical instrument, such as a violin, with your fingers to make a sound — the Italian word for plucking is pizzicato

Resonator — A part of a musical instrument (like the body of a guitar or the tube of a flute) that vibrates along with the sound waves created when the instrument is played, making the sound louder and fuller

Discussion Questions

Use the following questions as a guide for a class discussion after viewing the video:

 Violins have four strings. Ukuleles have four strings and a standard guitar has six strings. Show images of a pedal harp and a grand piano. Estimate how many strings a standard pedal harp (concert harp) would have? How many strings would a grand piano have? Which instrument, the harp or the piano, has more strings? Does the amount of strings an instrument has help create a richer, fuller sound? Explain your thinking.

> Answer: A standard pedal harp has 47 strings and a standard grand piano has 230 strings (even though a grand piano has 88 keys, there are more strings to produce a richer and fuller sound). Therefore, the grand piano has more strings. An instrument with more strings does not necessarily have a richer, fuller sound, but it can provide more texture (layers of sound) in music that is being performed. A rich and full sound is determined by many factors including the quality of strings, the instrument construction and/or the skill level of the player.

2. If you had two strings, one longer than the other, which string would produce a higher sound?

Answer: The shorter string would produce the higher sound because the string would vibrate at a higher frequency. Think of the difference between the sounds of the violin versus the double bass.

3. Why do strringed instruments typically use hollow resonators (body of the instrument) and not solid resonators?

Answer: Hollow resonators allow the vibrating strings to cause the air inside to vibrate which then produces a much louder and more amplified sound.

4. Why do most stringed instruments use resonators made of wood?

Answer: Wood has a great ability to vibrate and amplify sound unlike other materials such as metal or plastics. Wood is also lighter, easier to manipulate and is more cost effective.

Read-Aloud Suggestions

- "Catalina Plays the What?" by Antonia Aviles
- "Little Rosetta and the Talking Guitar" by Charnelle Pinkney Barlow
- "Victor Discovers the Violin" by D.J. Duvalsaint



Multicultural Instruments Connections

Materials

- Photos or projected images of multicultural stringed instruments
- Sound clips or videos of instruments

Instrument Suggestions

- Koto (Japan)
- Balalaika (Russia)
- Sitar (India)
- Erhu (China)
- Charango (Bolivia)
- 1. Display images of selected stringed instruments from around the world. Discuss similarities and differences between these instruments and more familar stringed instruments.
- Play recordings of multicultural instruments and ask students to share what they like/dislike of the sounds.





- A jump band (check with your PE teacher) or large bungee cord
- A large cardboard box
- 1. Holding the jump band/bungee cord taut between two students, have a third student "pluck" the band to produce a sound. Students holding the jump band then move slightly backward, pulling the band/cord tighter. Pluck the band again. Determine the difference in sound. Repeat as needed.
- 2. Thread the jump band/bungee cord through a large, sealed cardboard box. What happens to the sound vibrations of the jump band when a resonator is added?





Brass

Jake and Esther help children discover the brass instrument family including trumpets, tubas and trombones by showing how buzzing lips create the vibrations that make brass instruments sing. You'll meet young musicians, jam with a professional sousaphone player, and learn how to make your own brass-inspired instrument at home

Ohio Standards

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- 2.3RE Identify and apply elements of music using developmentally appropriate vocabulary.
- 3.2RE Identify the four families of orchestral instruments visually and aurally.
- 3.3RE Distinguish elements of music using developmentally appropriate vocabulary.

Watch



Watch the video "Brass."

Vocabulary

Bell — In all brass instruments, this enables good sound projection and volume

Valves — Buttons that are pressed down to change the length of the tube that air is blown through, which allows musicians to play different notes

Slide — Some brass instruments don't use valves to play a variety of notes — trombones use a slide that can be lengthened or shortened to produce different notes.

Mute — Devices that are inserted into the bell of a brass instrument to alter the sound, such as muffling the sound

Embouchure — The way the player shapes their lips and facial muscles to produce sound on a wind instrument — in the case of brass instruments, players "buzz" their lips to produce a sound.

Discussion Questions

Use the following questions as a guide for a class discussion after viewing the video:

1. Why do brass players need to buzz their lips to produce a sound on a brass instrument?

Answer: Brass instruments don't use reeds that vibrate when air passes through and just blowing air through a brass instrument will not create a vibration of the air either. Players must buzz their lips to create the vibrations needed to produce sound.

2. What will happen to the sound if a trombonist moves the slide of the instrument outward (gets longer)? What happens to the sound when the slide moves inward (gets shorter)?

Answer: As a trombonist moves the slide outward, the sound becomes lower because there is a longer tube for the air to move through. The sounder gets higher as the slide is moved inward because there is a shorter tube for the air to move through. 3. Where might you see brass instruments being played?

Answer: Parades, football games, Memorial Day/Veterans' services (e.g., taps), concerts, camp (bugle wake-up call) etc.

Read-Aloud Suggestions

- "Trombone Shorty" by Troy Andrews
- "Ben's Trumpet" by Rachel Isadora
- "Tallulah Plays the Tuba" by Tiffany Stone
- "The Big Brass Band" by Pam Bonsper
- "Brass Instruments" from the "All About Instruments" series by John Wood





- Fact or fiction cards (poster sized or handheld sized)
- Brass instrument facts (on following pages)
- Brass instrument images
- 1. State one of the following fact or a fiction statements about a brass instrument, sharing the accompanying image. Then, have students either move to poster sized cards that read "fact" or "fiction" or provide handheld cards reading the same thing. Alternatively, students could show a thumbs up for fact and a thumbs down for fiction.



Brass Facts

All statements below are true so you will have to change a word or two to make a statement fiction.

Fact or Fiction?

- The first horns were not made of brass, but used natural elements such as conch shells and animal horns.
- Brass is a metal made of copper and zinc that is used not only for making some instruments, but also for plumbing.
- The tuba is the largest and lowest sounding brass instrument.
- The piccolo trumpet is the smallest and highest sounding brass instrument.
- The trombone as we know it today came from an instrument called a sackbut.
- A bugle is a small brass instrument that doesn't use any valves, keys or slides.
- Early trumpets have been found in the Egyptian tomb of King Tut.
- The sousaphone, or marching tuba, was created by JW Pepper after American composer, John Philip Sousa, requested a tuba that would be easier to play while marching.
- If a single French horn was uncoiled, the tubing would measure up to 13 feet long.
- A euphonium is shaped similarly to the tuba, but is not considered part of the tuba family.







- Brass instrument mouthpiece (e.g., trumpet)
- Short length of rubber hose
- A plastic funnel
- Duct tape
- 1. Wind rubber tubing into an oval shape similar to a bugle. Hold the shape of the hose in place with duct tape.
- 2. Attach a trumpet mouthpiece to one end of the tubing. Create a sound.
- 3. Attach the plastic funnel to the other end of tubing and play again. Discuss what happened to the sound when the funnel was attached (sound is louder and projects more).





Percussion

Jake and Esther introduce percussion instruments. Viewers meet a young drummer named Ian, learn how percussion instruments create sound, and discover more fun ways to make music at home using everyday objects.



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- 2.3RE Identify and apply elements of music using developmentally appropriate vocabulary.
- 3.2RE Identify the four families of orchestral instruments visually and aurally.
- 3.3RE Distinguish elements of music using developmentally appropriate vocabulary.

Underlying Standards

- K.1CO Experience how music communicates feelings, moods, images and meaning.
- 1.1CR Improvise short rhythmic and melodic patterns using a variety of sound sources.
- 2.1CO Identify how music communicates feelings, moods, images and meaning.
- 3.1CO Express how elements of music communicate feelings, moods, images and meaning.

Watch

Watch the video "Percussion."

Vocabulary

Drum kit — A drum kit is a collection of drums, cymbals and other percussion instruments, which can be struck hard, struck soft, struck fast or struck slow

Percussionist — A musician who plays a variety of percussion instruments

Timbre — The unique sounds each instrument produces. The timbres of percussion instruments are produced by striking, shaking and/or scraping the instrument

Conductor — A person who directs the performance of an orchestra or choir

Discussion Questions

Use the following questions as a guide for a class discussion after viewing the video:

1. Why do bigger drums produce lower sounds?

Answer: Bigger drums, like bass drums and timpani drums, have more air inside so the drumhead vibrates slower and this causes longer sound waves to be produced. The slower frequency of these slower sound waves produces a lower sound.

2. Percussion instruments are generally put into three main categories; woods, metals and skins (membranes). Can you think of percussion instruments that would fit into these three categories?

Answer: Some instruments include:

Woods - tone blocks, claves, tick tock blocks, traditional maracas, guiros

Metals - triangles, finger cymbals, cowbells, glockenspiels, jingle bells

Skins: djembes, tubanos, bongos, snare drums

3. Show 2-3 percussion instruments from one percussion instrument category. Can you determine what the common characteristic is of each grouping of instruments?

Answers may vary.

4. Sometimes unusual objects are used as percussion instruments (e.g., brake drums and typewriters). Can you think of objects around your home that could be used as percussion instruments?

Answers may vary.

Read-Aloud Suggestions

- "Listen: How Evelyn Glennie, a Deaf Girl, Changed Percussion" by Shannon Stocker
- "Everything a Drum" by Sarah Warren
- "Percussion Instruments" from the "All About instruments" series by John Wood
- "Pokko and the Drum" by Matthew Forsythe





This activity is from the demonstration featured in the video.

- A variety of pots, pans, bowls, spoons etc.
- 1. Set up a kitchen drum set with found materials.
- 2. Try playing different patterns and/or multiple "instruments" at once.





- Laminated posters of 3-5 percussion instruments you have available for students to play.
- 1. Arrange students in a circle and provide each student an instrument (if possible arrange instruments in the circle in a pattern).
- 2. Set posters of the percussion instruments being used inside the circle.
- 3. Select a student conductor. The student conductor steps on an image and students who are holding that instrument play until the conductor steps on a different instrument image. The student conductor can be creative by the number of images that are stepped on or by incorporating tempo and rhythm.
- 4. Rotate students around the circle to a new instrument and select a new student conductor.





• A variety of household recyclables such as tin cans, plastic bottles and paper towel tubes

Option 1

- 1. Create a variety of percussion instruments made from recyclables and demonstrate each to students.
- 2. Discuss the materials used for each instrument.
- 3. Split students into small groups and give each group the opportunity to play each recycled instrument.

Option 2

1. Plan a recycled percussion instrument day where students make percussion instruments from items found at home.



Bands & Ensembles

Jake and Esther explore the power of making music together. Viewers meet young musicians who share how playing in a band or ensemble brings iov. connection. and a sense of accomplishment. With live performance clips, this episode shows how individual instruments combine to create something truly special.

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Watch

BANDS & ENSEMBLES

Watch the video "Bands & Ensembles."

IN TUNE: EVERYDAY MUSIC

Vocabulary

Ensemble — A group of musicians who perform together

Orchestra — An ensemble of musicians playing a variety of instruments, including a large selection of instruments from the string family

Band — An ensemble of musicians playing a variety of instruments, including a large selection of instruments from the wind and percussion family

Chorus — An ensemble of musicians who perform by singing, usually in different voice parts

Discussion Questions

Use the following questions as a guide for a class discussion after viewing the video:

1. Have you ever been to a concert or seen a music group, such as a band, chorus, orchestra or soloist, perform?

Answers may vary.

2. List as many types of performing groups that you can think of.

Answers could include marching band, rock band, jazz band, polka band, mariachi band, choir, opera, musical theater, popular music, orchestra, etc.

3. If you could start your own music group, what kind of music would you perform?

Answers may vary.

Read-Aloud Suggestions

- "Our Marching Band" by Lloyd Moss
- "Adela's Mariachi Band" by Denise Vega
- "Wild Symphony" by Dan Brown
- "How To Build an Orchestra" by Mary Auld
- "Piggies in a Polka" by Kathi Appelt
- "Horace and Morris Join the Chorus" by James Howe





- Images of instruments in bands and/or orchestras
- 1. Choose a student to select a photo of an instrument. They show the photo to their classmates, but the teacher cannot see it.
- 2. The teacher asks yes or no questions to pinpoint the name of the mystery instrument such as, "Is it a brass instrument?" or "Does it use a reed?" etc. Try to name the instrument in 10 questions or less.





- Audio recordings of individual instruments found in bands and/or orchestras
- Hand held sized images of instruments that coordinate with the available audio recordings
- 1. Distribute an instrument image to each student.
- 2. Play an audio recording of an instrument and students who have an image that matches the instrument they hear stand up. Display the correct answer. Repeat.
- 3. Variations:
 - After a few examples have been shared, have students trade cards with a classmate to repeat the activity.
 - Distribute 2-3 different instrument image cards to each student to make the activity more challenging.































