

# WORLD LANGUAGE - STEM MODULE COVERSHEET

## Good Vibrations

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| <b>Target Language:</b> English as a Second Language  | <b>Grade Level:</b> 1 |
| <b>Proficiency Level:</b> Junior Novice Low – Junior Novice Mid   |                       |
| <p><b>Context and Storyline:</b></p> <p>Students discover the connection between sound and vibrations through teacher demonstrations. With each demonstration they will determine what is vibrating in order to make the sound waves. They will identify the difference between higher and lower pitches and experiment with changing pitches on a vibrating string, thus changing the frequency of the waves. They will create their own instruments and identify the different ways they can cause vibration: hitting, blowing, pulling, and shaking. Then they devise accompaniments for their chant and practice for the performance. In the concert students will each identify what vibrates in their instrument, whether the wave frequency is fast or slow, and how they cause the vibration.</p> |                       |
| <b>Enduring Understanding:</b> We live in a world of sounds made in different ways.   |                       |
| <p><b>Essential Questions:</b></p> <ol style="list-style-type: none"> <li>1. What is sound?</li> <li>2. What makes sounds different from one another?</li> <li>3. How can we make sound?</li> <li>4. How are sounds important in our lives?</li> </ol>  |                       |
| <p><b>Module Duration and Lessons:</b> Five 30-minute lessons</p> <p>Lesson 1 – What is Sound?</p> <p>Lesson 2 – Characteristics of Sound</p> <p>Lesson 3 – Sounds We Like and We Don't Like</p> <p>Lesson 4 – We Can Make Sound</p> <p>Lesson 5 – Good Vibrations Concert</p>  |                       |

| Standards Targeted   |  |
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| <p><b>5C – World Language Standards</b></p>  | <p><b>5E – STEM Standards</b></p>  |
| <p><b>Communication</b></p> <ul style="list-style-type: none"> <li>• Answer simple questions related to sound. (1.1)</li> <li>• Interpret basic vocabulary of sound. (1.2)</li> </ul> <p><b>Cultures</b></p> <ul style="list-style-type: none"> <li>• Students use instruments of different</li> </ul> | <p><b>NGSS</b></p> <p><b>1. LS. Light and Sound</b></p> <p>Students who demonstrate understanding can:</p> <ul style="list-style-type: none"> <li>• 1. LS. e. Carry out investigations to provide evidence that vibrating matter creates sound and that sound can cause matter to vibrate.</li> <li>• 1. LS. f. Build a device that uses light or</li> </ul> |

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| <p>cultures to produce sounds.</p> <p><b>Connections</b> (sample below)</p> <ul style="list-style-type: none"> <li>• Students access new information and reinforce existing knowledge of other content areas through the target language (3.1)</li> </ul> <p><b>Comparisons</b></p> <ul style="list-style-type: none"> <li>• Students demonstrate understanding of the process of sound production through comparisons of English and target language (4.1)</li> </ul> <p><b>Communities</b></p> <ul style="list-style-type: none"> <li>• Perform songs and chants in the target language (5.1)</li> </ul> | <p>sound to send a signal over a distance.</p> |
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| Knowledge: Students will know...  | Skills: Students can...  |
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| <p>Vocabulary (both linguistic and content areas)</p> <p>Content obligatory language:</p> <ul style="list-style-type: none"> <li>• Sound, vibration, waves, air</li> <li>• High, low, fast, slow, near, Far</li> <li>• Gong, Drum, Whistle, Maraca, Kazoo, Oboe, Güiro, Guitar, Maraca</li> <li>• Frequency, pitch, volume</li> </ul> <p>Content compatible language:</p> <p>Hear, Ear<br/>Pretty, Travel</p> <p>Expressions and patterns<br/>I like, I don't like, Do you like<br/>...make vibration by...<br/>My instrument is like a....</p> | <p>(Can do statement)</p> <p><b>I Can:</b></p> <ul style="list-style-type: none"> <li>• Make and name an instrument that produces sound</li> <li>• Identify the sound that the instrument makes</li> <li>• Classify the pitch of my instrument as high or low</li> </ul> |

| Performance Assessment   |
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| Interpretive Task  |
| <p>At the final performance, the teacher introduces the instruments and sound, students step forward based on how the sounds of their instruments are made and whether the pitch is high or low.</p> |

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### Presentational Task

- Students perform (1) the “If you’re happy” song, and (2) the Sound Chant, while playing instruments that they have made.
- Students describe the sound of their instruments and their characteristics, including pitch and frequency.

### Interpersonal Task

- Students interview one another during lesson 3 in order to see which sounds each likes and does not like.
- Students interview one to two classmates to find out what their instrument looks like, how their instruments are made, and what the sound is. They will use the information they get from the interview to fill in the worksheet and these worksheets can be collected and published as a Class Instrument Book.

### Materials/Resources

#### Lesson 1

- Song
- ruler, pencil
- bowl tightly covered with clinging plastic or aluminum foil, grains of rice, big pan lid, wooden spoon
- Power Point - Sounds
- **Worksheet 1a** – Song *If you’re happy and you know it*
- **Worksheet 1b** – Literacy Practice: *Listen, Sound, Vibration*
- **Worksheet 1c** – Cards with process of ball dropping (small size for individual students; large for teacher)
- Resource  
<http://www.youtube.com/watch?NR=1&v=fv3ZqNFIBc8&feature=endscreen>

#### Lesson 2

- Pencil box without lid or other sturdy (plastic, corrugated cardboard), rectangular container— one for demonstration, plus enough for students working in pairs (if desired and available, it would be good to have one for each student)
- Sturdy rubber bands, two or more for demonstration and enough for each student pair to have several apiece
- 2 hand-made drums from cylinders and balloons, rubber bands (see [http://www.ehow.com/video\\_4428434h\\_make-drum-using-container-balloons.html](http://www.ehow.com/video_4428434h_make-drum-using-container-balloons.html)) one should have higher pitch, one lower. (This can be accomplished by using a bigger and a smaller cylinder.) When demonstrating, be sure to hold the drum in the hand and not to rest one end on a desk or other surface.
- Cards with pictures for the engagement (This can either be done high tech with the items copied into a flipchart or low tech with poster for chart and cards for pictures.)
- Power Point - Sounds
- **Worksheet 2a** – *Things that do/do not make sound*
- **Worksheet 2b** – Literacy practice

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### Lesson 3

- Maraca, gong, hand drum, whistle oboe instruments or power point with pictures and sounds
- Power Point - Sounds
- **Worksheet 3a** – Sounds I like and do not like
- **Worksheet 3b** – Sounds that I like and sounds that I do not like
- **Worksheet 3c** – Sounds my friend likes and does not like

### Lesson 4

- See list of instrument instructions for all necessary materials
- Recorder instrument
- Power Point - Sounds
- It would be very helpful to have parents or other assistants come in to help with the instrument construction near the end of this lesson.
- **Worksheet 4a** – Instruction for Mr. Music puppet
- **Worksheet 4b** - Assessment
- **Worksheet 4c** – Instructions for Making Instruments

### Lesson 5

- Maraca, gong, hand drum, whistle oboe instruments or power point with pictures and sounds
- **Worksheet 5a** – Student Can-Do Statement
- Recorder

### STEM Background for teachers:

Sound stimulates one of the five senses--hearing. A sound starts as the vibration of an object. The vibration of the object then makes another object vibrate. Air and water also vibrate due to the moving molecules. Most of the sounds that we hear travel through the air, a gas. Sound can also travel through liquids and solids. Any object that sound waves travel through is called a medium. If there is no medium present, there is no sound. One example of a place where there is no sound is outer space. There are no mediums for the sound to travel through.

The vibrations travel as waves, moving away from the object in all directions. When the vibration waves enter our ears, the ears translate them into nerve impulses. The impulses travel to the brain, which interprets them as a sound.

Musical sounds are produced in different ways. Certain instruments make sounds when struck. For example, when a drummer hits the top of a drum, it vibrates, producing sound. Xylophones have a series of different sized bars, each of which sounds a particular note when struck.

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A stringed instrument, such as a guitar, violin, or banjo, produces sound when a player makes one or more of its strings vibrate. This vibration causes parts of the instrument's body to vibrate, creating sound waves in the air.

A wind instrument, such as a clarinet, flute, or trumpet, creates sound when a player makes air inside the instrument vibrate. A clarinet has a flat, thin part called a *reed* attached to its mouthpiece. The reed vibrates when a player blows across it. The vibration of the reed makes the air vibrate. The column of air in a flute vibrates when a musician blows across a hole in the flute's mouthpiece. In a tuba, the vibrating lips of the player make the air vibrate.

Sound is described in terms of frequency and pitch, wavelength, intensity and loudness, and quality.

The frequency of a sound is the number of waves that pass a given point each second. The more rapidly an object vibrates, the greater the frequency. Frequency is measured in hertz. One hertz equals one vibration or sound wave per second.

The frequency of a sound determines its *pitch*—how high or low the sound is that we hear it. A high-pitched sound has a higher frequency than a low-pitched sound. A higher sound wave moves faster than a low-pitched sound wave.

Most people can hear sounds that have frequencies from about 20 to 20,000 hertz. Bats, dogs, and many other kinds of animals can hear sounds with frequencies much higher than 20,000 hertz.

Wavelength is the distance between any point on one wave and the corresponding point on the next wave. Wavelength is related to frequency: The greater the frequency of a wave, the shorter the wavelength.

The intensity of a sound measures the power of its sound waves. Loudness refers to how strong a sound seems to be when we hear it. For sounds of a given frequency, the more intense a sound is, the louder it seems.

Information compiled from BrainPOP and World Book Students, 2012.

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## Good Vibrations/Sound

### Lesson 1-What is Sound? *What is Sound?*

| Lesson 1 of 5                         |  | Duration: 30 Minutes |
|---------------------------------------|--|----------------------|
| <i>Objectives</i>                     | <p><b>I Can:</b></p> <p>Oral language:</p> <ul style="list-style-type: none"> <li>○ Tell what sound is</li> </ul> <p>Literacy:</p> <ul style="list-style-type: none"> <li>○ Recognize the words: listen/hear, sound, vibration</li> </ul> <p>STEM and Other Subject Areas:</p> <ul style="list-style-type: none"> <li>○ Explain how to make sound.</li> </ul>  |                      |
| <i>Vocabulary and Expressions</i>     | <p><b>Content obligatory language:</b><br/>Listen/hear, sound, vibration, wave, and air</p> <p><b>Content compatible language:</b><br/>Make, use, ear, music</p>   |                      |
| <i>Materials/Resources</i>            | <ul style="list-style-type: none"> <li>○ Song</li> <li>○ ruler, pencil</li> <li>○ bowl tightly covered with clinging plastic or aluminum foil, grains of rice, big pan lid, wooden spoon</li> <li>○ Ppt</li> <li>○ <b>Worksheet 1a</b> – Song <i>If you're happy and you know it</i></li> <li>○ <b>Worksheet 1b</b> – Literacy Practice: <i>Listen, Sound, Vibration</i></li> <li>○ <b>Worksheet 1c</b> – Cards with process of ball dropping (small size for individual students; large for teacher)</li> <li>○ Resource<br/><a href="http://www.youtube.com/watch?NR=1&amp;v=fv3ZqNFIBc8&amp;feature=endscreen">http://www.youtube.com/watch?NR=1&amp;v=fv3ZqNFIBc8&amp;feature=endscreen</a></li> </ul> |                      |
| <i>Lesson Storyline and Core Text</i> | <p>Students discover the connection between sound and vibrations through teacher demonstrations. With each demonstration they will determine what is vibrating in order to make the sound waves.</p> <p style="text-align: center;"><i>Today we are going to talk about sound. Let's listen to this....<br/>I know a song about clapping. Maybe you know it, too.<br/>Today we are going to talk about sound. Let's listen to this....<br/>I love hearing music, all kinds of music.<br/>Can any of you play a _____?<br/>I can also make a sound with my hands.<br/>I know a song about clapping. Maybe you know it, too.<br/>Let's feel some vibration.</i></p>  |                      |

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|  | <p><i>I can make it make a sound—listen.<br/>Vibration is moving back and forth, very fast.</i></p> <p><i>Sound, sound, what is sound?<br/>What makes all the sounds around?<br/>Something vibrates,<br/>makes a wave that<br/>travels, travels<br/>through the air<br/>To the ear.<br/>Sound, sound, what is sound?<br/>Vibration makes the sounds around.</i></p> |
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| Key Elements   | Lesson 1 Procedures - <i>What is Sound?</i>  |
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| <p><i>Engagement</i></p> <ul style="list-style-type: none"> <li>● <i>Object, event or question used to engage students.</i></li> <li>● <i>Connections facilitated between what students know and can do</i></li> </ul> | <p><b>Introduction to sound</b></p> <p>Opening routine</p> <p>T: <i>Today we are going to talk about sound. Let's listen to this...</i><br/>(Teacher begins by playing music of any kind; something the teacher enjoys and will enjoy sharing.)</p> <p>T: <i>I love hearing music, all kinds of music. I can make music with (holding up a picture of any instrument the teacher may play). This is a (name of instrument). Can any of you play a _____?</i><br/>(Continue with other instruments children might possibly play at this age, such as violin, guitar, piano, and drum.)</p> <p>T: (Reviewing) <i>Let's see..._____ (Name of student/s) can play a _____ (name of instrument), and...</i> (Continue with all the students and all the instruments represented in the class, so children hear the names of instruments several times). <i>All of these are musical instruments, and they all make sound.</i></p> <p>T: (Teacher begins by clapping) <i>I can also make a sound with my hands.</i></p> <p>T: <i>I know a song about clapping. Maybe you know it, too.</i> (Teacher sings and claps, as indicated. The second time Teacher invites students to join in.)</p> <p><b>Ppt 1-1 &amp; 1-2</b></p> <p style="text-align: center;"><i>If you're happy and you know it, clap your hands. (clap, clap)<br/>If you're happy and you know it, clap your hands. (clap, clap)<br/>If you're happy and you know it,<br/>Then your sounds will surely show it.<br/>If you're happy and you know it, clap your hands. (clap, clap)</i></p> <p>T: (Stamping) <i>I can make a sound with my feet. Who can make another sound?"</i><br/>(Students raise hands and respond with various sounds)</p> <p>T: (Student name) _____ <i>can make a sound with _____"</i></p> |

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|  | <p>(Students give different kinds of answers.)</p> <p>T: <i>I can also make sounds using all kinds of things. How about a glass of water?</i> (Teacher hits the glass with a pen.) <i>I can make sound using a bell.</i> Teacher shakes the bell)</p> <p>Literacy Activity: Learn and practice the word: <i>listen/hear</i>. Use <b>Worksheet 1b</b></p> <p>T: <i>Hmmm—but what IS sound? Let’s find out more ...tomorrow.</i></p> <p>Closing routine</p>  |
| <p><i>Explanation</i></p> <ul style="list-style-type: none"> <li>• <i>Students explain their understanding of concepts and processes.</i></li> </ul> <p><i>New concepts and skills are introduced as conceptual clarity and cohesion are sought.</i></p> | <p><b>Do you feel the vibration?</b></p> <p>Opening routine</p> <p>T: <i>We heard different sounds last time. Can you all try to make some sound now?</i></p> <p>S: (Make different kinds of sound)</p> <p>T: <i>Can you try NOT to make any sound?</i></p> <p>S: (Students keep quiet and not moving.)</p> <p>T: <i>Great! So let me try to make some sound. And we’ll see what sound IS.</i></p> <p>T: (Teacher holds up the item and asks) <i>Does this pencil make a sound?</i></p> <p>S: <i>No.</i></p> <p>T: <i>I can make it make a sound—listen.</i> (Teacher taps pencil so it bounces a few times) <i>Watch.</i> (Teacher taps pencil again.) <i>See, the pencil is moving back and forth when it makes a sound.”</i></p> <p>T: <i>Now let’s try some different sounds. I want to ask some of you to help me.</i></p> <p>S: (One volunteer is invited to try)</p> <p>T: <i>Here is a ruler. Does a ruler make a sound?</i> (holding it up) <i>Let’s see if we can make it make a sound. Let’s put the ruler on the edge of desk like this</i> (Place the ruler with ½ or 2/3 of the ruler hanging over the edge of the desk, and hold it firmly in place on the desk). <i>How can we make a sound with the ruler now?</i></p> <p>S: Students respond.</p> <p>T: <i>Great! See, the ruler moves up and down very fast and makes a sound when we push it down. The ruler vibrates. Can you see it vibrate?</i></p> <p>S: <i>Yes!</i></p> <p>T: <i>Let’s feel some vibration. I will give each of you a craft stick. I will put one between my teeth. Now I push down on the stick and let it go.</i> (Demonstrate.) <i>Can you do that too? Do you feel the vibration? Do you hear the sound?</i></p> <p>S: <i>Yes!</i></p> <p>T: <i>What did the vibration look like? Show me with your hands.</i> (Shake hands rapidly back and forth, students shake their hands like the teacher’s.)</p> <p>T: (Repeat as with ruler): <i>What is vibrating? Can you <b>feel</b> it vibrate?”</i></p> <p>S: (Responses vary)</p> <p>T: <i>Vibration is moving back and forth, very fast. We’ll learn more about vibration next time.</i></p> |



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|  | <p>Literacy Activity: Learn and practice the word: <i>Sound</i>. Use <b>Worksheet 1b</b></p> <p>Closing routine, including song</p>   |
| <p><i>Exploration</i></p> <ul style="list-style-type: none"> <li>• <i>Objects and phenomena are explored.</i></li> </ul> <p><i>Hands-on activities, with guidance.</i></p> | <p><b>What is a vibration?</b></p> <p>Opening routine</p> <p>T: <i>Last time we learned about vibration. What is a vibration? Can you show me?</i></p> <p>S: (Shaking hands) <i>Moving back and forth.</i></p> <p>T: <i>Very good! A vibration is when there is movement back and forth. Vibration can produce sound. Today we'll see how sound travels.</i></p> <p>T: <i>I will make a sound.</i> (Teacher uses the ruler to make some sound).</p> <p>T: <i>Did you see vibration?</i></p> <p>S: <i>Yes!</i></p> <p>T: <i>We know the vibration makes the sound. But how does it travel from here to your ear?</i> (Teacher points to the ruler and ears).</p> <p>T: <i>Sound travels. Can we see the sound travel? We can sometimes see vibrations, but they make waves in the air that we can't see. Then those waves travel through the air.</i></p> <p>T: <i>We can't see the waves, but sometimes we can see what the waves do. Maybe we can see how sound waves travel. I brought a bowl to class today, and I put some plastic wrap (aluminum foil) over it, very tight. Now I need a helper. (Teacher calls on volunteer.) Here I have a few grains of rice. (Name of student), please drop some grains of rice onto the plastic wrap (aluminum foil)—let's count them, class. (Count grains of rice as they are dropped.) Thank you, (Student). Now I need another helper. We are going to use a cookie sheet and a wooden spoon to see if we can make the rice jump without touching it. I will hold the cookie sheet right here, above the bowl. (Student), please hit the cookie sheet with the spoon, and hit it hard. Class, watch carefully what happens to the rice. We will say "One, two, three, hit," to tell (Student) when to hit the cookie sheet. Ready? Okay</i></p> <p>Ss and T: <i>One, two, three, HIT!</i></p> <p>T: <i>That was a <b>loud</b> sound! What did you see? You need to look very carefully. (Point to the bowl with the rice on it.) Let's do it again! (Repeat as above).</i></p> <p>T: <i>What did you see?</i></p> <p>S: <i>The rice is moving.</i></p> <p>T: <i>Yes, the rice is jumping! Did (Student) touch the rice? Did I touch the rice? What did we do to make the rice jump?</i></p> <p>T: (Student) <i>hit the pan, and the pan made a _____. And the vibration made a _____. And the sound wave hit the plastic and made the plastic _____, and that made the rice _____.</i></p> <p>T: <i>We can see vibrations. Vibrations make waves in the air that we can't see. Then those sound waves travel through the air to the ear.</i></p> <p>Literacy Activity: Learn and practice the word: <i>Vibration</i>. Use <b>Worksheet 1b</b></p> |

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|  | Closing routine   |
| <p><i>Elaboration</i><br/> <i>Activities allow students to apply concepts in contexts, and build on or extend understanding and skill.</i></p> | <p><b><i>Sound, vibration and waves</i></b><br/> Opening routine<br/> T: (Teacher plays music.) <i>What is this?</i><br/> S: <i>Sound. Music.</i><br/> T: <i>Good! It is sound. Music is a kind of sound.</i><br/> (Teacher shows a violin or any kind of musical instrument that is convenient to get.)<br/> T: <i>What is this? Can I use this to make sound?</i><br/> S: <i>Yes.</i><br/> (Teacher demonstrates how to make sound using the instrument and shows Ss where vibration is from.)<br/> T: <i>What makes sounds?</i><br/> S: <i>Vibration.</i><br/> T: <i>Great! Something vibrates, that's vibration.</i> (hold hand up, fingers tight, and move quickly back and forth)<br/> T: <i>How does vibration travel?</i> (move hand up and down in wave-like motion)<br/> S: <i>Answers vary—wave, sound wave, etc.</i><br/> T: <i>Yes! Vibration makes a wave. A wave travels</i> (move hand up and down in wave-like motion) <i>through the air to the ear.</i> (Bring wave motion to the ear). <i>That's how the sound goes all around!</i></p> <p>Divide students into pairs and distribute cards showing sequence of vibration to sound wave to ear. Have students work together to decide what the order is, then have student volunteers come to the front to order the big cards in front of the group. Narrate the sequence as the students order the cards.</p> <p><b>Worksheet 1c</b></p> <p>T: <i>We've learned a lot about sound. Let's put it in a chant.</i><br/> (Teach the chant one line at a time, using a call and response technique. The teacher models the line, with actions, and students repeat it. In this first teaching phase, repeat the chant several times. Continue to use call and response with the chant for a couple of days, and after the second day or so invite student volunteers to lead the chant.). <b>Ppt 1-3 &amp; 1-4</b></p> <p><i>Sound, sound, what is sound?</i> (cup hands behind ears, as if to listen)<br/> <i>What makes all the sounds around?</i> (shrug shoulders and hold out hands)<br/> <i>Something vibrates,</i> (hold hand up, fingers tight, and move quickly back and forth)<br/> <i>makes a wave that</i> (move hand up and down in wave-like motion)<br/> <i>travels, travels</i> (continue wave motion)<br/> <i>through the air</i> (continue wave motion)</p> |

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|  | <p><i>to the ear.</i> (bring the wave motion up to the ear)<br/> <i>Sound, sound, what is sound?</i> (cup hand behind ears)<br/> <i>Vibration makes the sounds around.</i> (Vibrate hand)</p> <p>T. <i>In this lesson, we learned about sound, vibration and waves. Next class we will learn more about the types of sounds that we hear.</i></p> <p>Closing routine.</p>   |
| <p><i>Evaluation</i><br/> <i>Students assess their knowledge, skills and abilities. Activities permit evaluation of student development and lesson effectiveness</i></p> | <p><b>Assessment</b><br/> <b>Opening routine</b></p> <ol style="list-style-type: none"> <li>1. <b>Interpersonal: Play Simon Says:</b> Teacher/Students serving caller and ask the class to do as they command.</li> <li>2. <b>Presentational: Show and Tell:</b> students explain and demonstrate how they can make a sound; e.g., clap their hands, stomp their feet, make sound by making a ruler vibrate; drop grains of rice or pencil and make sound.</li> <li>3. <b>Interpretive:</b> Recognize words such as sound, vibrate, and wave; sound out the vocabulary.</li> <li>4. <b>Interpretive:</b> Connect the vocabulary to pictures indicating their meaning.</li> <li>5. <b>Presentational:</b> In small groups of students sing the “If you are happy...” and Chant.</li> </ol> |

| Teacher Reflection Lesson 1- <i>What is Sound</i> |  |
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| <i>What worked well?</i>                          |  |
| <i>What did not work well?</i>                    |  |
| <i>What would I do differently?</i>               |  |
| <i>Other comments or notes</i>                    |  |

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### Lesson 2 – Characteristics of Sound

#### *Characteristics of Sound*

| Lesson 2 of 5                     |   | Duration: 30 Minutes |
|-----------------------------------|---|----------------------|
| <i>Objectives</i>                 | <p><b>I Can:</b></p> <p>Oral language:</p> <ul style="list-style-type: none"> <li>• Tell what pitch is</li> <li>• Identify high and low pitch</li> <li>• Tell when sound waves are fast the pitch is high</li> <li>• Tell when sound waves are slow the pitch is low</li> </ul> <p>Literacy:</p> <ul style="list-style-type: none"> <li>• Recognize the words: pitch, high, low, voice box, fast, slow</li> </ul> <p>STEM and Other Subject Areas:</p> <ul style="list-style-type: none"> <li>• Understand the concepts of pitch and frequency of sound.</li> </ul>   |                      |
| <i>Vocabulary and Expressions</i> | <p><b>Content obligatory language:</b></p> <p><i>high, low</i><br/><i>Fast, slow</i><br/><i>Pitch, frequency, voice box</i></p> <p><b>Content compatible language:</b></p> <p><i>Travel, Same, Different, Trough</i><br/><i>Big, small, cylinder</i></p>  |                      |
| <i>Materials/Resources</i>        | <ul style="list-style-type: none"> <li>○ Pencil box without lid or other sturdy (plastic, corrugated cardboard), rectangular container—one for demonstration, plus enough for students working in pairs (if desired and available, it would be good to have one for each student)</li> <li>○ Sturdy rubber bands, two or more for demonstration and enough for each student pair to have several apiece</li> <li>○ 2 hand-made drums from cylinders and balloons, rubber bands (see <a href="http://www.ehow.com/video_4428434h_make-drum-using-container-balloons.html">http://www.ehow.com/video_4428434h_make-drum-using-container-balloons.html</a>) one should have higher pitch, one lower. (This can be accomplished by using a bigger and a smaller cylinder.) When demonstrating, be sure to hold the drum in the hand and not to rest one end on a desk or other surface.</li> <li>○ Cards with pictures for the engagement (This can either be done high tech with the items copied into a flipchart or low tech with poster for chart and cards for pictures.)</li> <li>○ <b>Worksheet 2a</b> – <i>Things that do/do not make sound</i></li> <li>○ <b>Worksheet 2b</b> – Literacy practice</li> </ul> |                      |

## World Language-STEM MODULE COVERSHEET

### Good Vibrations/Sound

|  |  |
|--|--|
| <p><i>Lesson Storyline and Core Text</i></p> | <p>Students explore different sounds and some of the properties of the sounds. They will identify the difference between higher and lower pitches and experiment with some instruments to see how to change the pitches and frequencies of the sound. For example, they try to find out how to change pitches on a vibrating string, thus change the frequency of the waves.</p> <p><i>Core Text</i></p> <p style="padding-left: 40px;"><i>We are going to learn more about sound today.</i><br/> <i>Makes a wave—</i><br/> <i>Let’s do our chant together.</i><br/> <i>Open your eyes. Did you all hear some sounds?</i><br/> <i>Who can tell me one sound they heard?</i><br/> <i>Is that sound higher or lower?</i><br/> <i>When the vibration is slow, the pitch is... (Low), when the vibration is fast the pitch is... (high)</i><br/> <i>I have made a drum, and I think it can make a sound.</i><br/> <i>When I talk, or sing, or hum, my voice box vibrates like a drum</i><br/> <i>We learned about different sounds.</i><br/> <i>When the pitch is high, the vibration is fast.</i><br/> <i>When the pitch is low, the vibration is slow.</i></p> |
|--|--|

| Key Elements   | Lesson 2 Procedures   |
|--|---|
| <p><i>Engagement</i></p> <ul style="list-style-type: none"> <li>● <i>Object, event or question used to engage students.</i></li> <li>● <i>Connections facilitated between what students know and can do</i></li> </ul> | <p><b>I hear some sounds too</b></p> <p>Opening routine</p> <p>T: <i>We are going to learn more about sound today. Let’s see... (Thinking)...what <u>is</u> sound, anyway? Something..... (Move finger to show vibration, as in the chant, and pause for students to finish the thought).</i></p> <p>S: (may respond) <i>vibrates.</i></p> <p>T: <i>...Something vibrates, makes a ... move hand for wave motion, (wait for students to fill in the word)</i></p> <p>S: (may respond) <i>wave!</i></p> <p>T: <i>makes a wave—that’s right! That’s our chant, isn’t it! Let’s do our chant together.</i></p> <p>Perform the chant together, again in a call-and-response style. The teacher says each line, with motions, and the students say it back. <b>Ppt 1-3 &amp; 1-4</b></p> <p style="padding-left: 40px;"><u><i>Sound, sound, what is sound?</i></u> (cup hands behind ears, as if to listen)</p> <p style="padding-left: 40px;"><u><i>What makes all the sounds around?</i></u> (shrug shoulders and hold out hands)</p> <p style="padding-left: 40px;"><u><i>Something vibrates,</i></u> (hold hand up, fingers tight, and move quickly)</p> |

# World Language-STEM MODULE COVERSHEET

## Good Vibrations/Sound

| Key Elements   | Lesson 2 Procedures   |
|--|---|
|  | <p>back and forth)<br/> <u>makes a wave that</u> (move hand up and down in wave-like motion)<br/> <u>travels, travels</u> (continue wave motion)<br/> <u>through the air</u> (continue wave motion)<br/> <u>To the ear.</u> (bring the wave motion up to the ear)<br/> <u>Sound, sound, what is sound?</u> (cup hand behind ears)<br/> <u>Vibration makes the sounds around.</u> (Vibrate hand)</p> <p>T: <i>In this lesson, we will hear more about sounds. Let's all close our eyes and sit quietly and just listen. See how many sounds you can hear.</i><br/> T: (Sit silently for 10 seconds or so.) <i>Open your eyes. Raise your hand if you heard any sounds. (Students raise hands.) I heard some sounds, too.</i><br/> T: <i>Let's try it again, and this time I'm going to make some sounds. See if you can tell me what they are. Ready...Close your eyes.</i></p> <p><b>Note:</b> At this point the teacher makes some sounds that the students have previously heard, such as the tapping pencil, the ruler and the cookie sheet, and also other common sounds like clapping, stomping feet, or other familiar classroom sounds.</p> <p>T: <i>Open your eyes. Did you all hear some sounds? Who can tell me one sound they heard?</i> (Continue asking volunteers what they heard<br/> Students give responses, Teacher recasts in English (ESL) or in the target language, as necessary.)<br/> T: <i>Some things make sound, and some things don't. Here are some pictures of some things in our lives. Not all of them make sound. Let's look at them and decide if they make sound or not.</i></p> <p>T: (Hold up pictures) <i>Does the _____ make sound?</i> (Have students volunteer to tell if something does or does not make sound, using the pattern: "That makes sound." Or "That doesn't make sound.") <b>Ppt 2-1</b></p> <p><b>Note:</b> you may wish to add pictures to extend the conversation or to use your own pictures that reflect recently learned vocabulary. Let students complete <b>Worksheet 2a</b> in group or individual.</p> <p>T: <i>Great! There are all kinds of sounds in our lives. Do they all sound the same? Let's find out some things that make sounds different.</i></p> |
| <p><i>Exploration</i></p> <ul style="list-style-type: none"> <li>• <i>Objects and phenomena are explored.</i></li> </ul> | <p><b>Sound travels</b></p> <p>T: <i>We learned that sounds are made by vibration. One way that sounds can be different is that vibration can be fast (shaking hands fast) and vibration can be slow (shaking hands slow). Let's see if we can find out how this</i></p>  |

**World Language-STEM MODULE COVERSHEET**  
**Good Vibrations/Sound**

| Key Elements   | Lesson 2 Procedures   |
|--|---|
| <ul style="list-style-type: none"> <li>● <i>Hands-on activities, with guidance.</i></li> </ul> | <p><i>works.</i></p> <p>T: <i>I have something here that can help us understand how sounds can be different.</i></p> <p>T: <i>I'll take this pencil box (or other box) and put a rubber band over it. Who thinks they can make a sound with this rubber band? Ppt 2-2</i></p> <p>T: (call on student volunteer) <i>Great! _____ (Name of student) pulled on the rubber band and it made a sound. I can pluck it (demonstrate) over and over and it makes the same sound. So the rubber band is ... (pause for students to supply the word) vibrating!</i></p> <p>T: <i>Right, the rubber band vibrates and it makes a sound.</i></p> <p>T: <i>I can pluck the rubber band over and over, and it makes the same sound. But now I want the rubber band to make a different sound—look, and listen! (Press finger lightly on the middle of the rubber band and pluck one side.) Is that sound higher or lower? (higher)</i></p> <p>T: <i>The sound is higher because that part of the rubber band is moving faster. (remove finger and pluck again) Now is the sound higher or lower? (lower)</i></p> <p>T: <i>Right, the sound is lower because the vibration is slower. If you look carefully, maybe you can see the difference.</i></p> <p>T: (Pluck the full rubber band, then the half. Students may be able to see the vibration of the full rubber band, but it will probably be too fast to see with the half rubber band.) <i>So this sound is called "pitch." When the vibration is slow, the pitch is... (Low), when the vibration is fast the pitch is... (high) (Use gestures for high and low).</i></p> <p>T: (Show pictures of fast and slow waves on the board. Pictures can be hand-drawn. Circle the one that students identify about the rubber band.)</p> <p>T: <i>Let's pluck the half of the rubber band. These are the fast waves, close together. When the vibration is fast, the pitch is high. (Do hand gesture). (Show pictures of fast and slow waves on the board.)</i></p> <p>T: <i>Now let's pluck the whole rubber band. What did it sound like? Was it a fast wave (pointing to fast wave picture on the board) or was it a slow wave (pointing to slow wave picture)? (Circle the one that students identify.)</i></p> <p>S: (Respond by raising their hand when the teacher points to each of the different waves).</p> <p>T: <i>When the vibration is slow, the pitch is low (do hand gesture). Look at the slow waves. (Point to the slow wave picture.) Who can show us which one is the fast wave? (Invite student volunteer to the board.) Which one is the slow wave?</i></p> <p><b>Note:</b> for the next step, be sure that the second rubber band is either thicker or thinner, or stretched tighter, than the first one, so that the pitch will be different.</p> |

## World Language-STEM MODULE COVERSHEET

### Good Vibrations/Sound

| Key Elements   | Lesson 2 Procedures  |
|--|--|
|  | <p>T: <i>Pitch tells us how high or how low the sound is.</i> (Gesture for high and low pitch and have students imitate the gesture).</p> <p>T: <i>I have another rubber band here. Let's put it on the pencil case. Who would like to pluck the new rubber band?</i> (choose a student) _____ (Name), <i>please pluck the new rubber band. Now pluck the first rubber band.</i></p> <p>T: <i>Class, is the pitch of the new rubber band higher or lower, or is it the same?</i> (Class responds.) <i>So, if the pitch of the new rubber band is higher/lower, then is it vibrating faster or slower? We can add more rubber bands, too, so it's almost like a guitar!</i> (Add rubber bands and strum like a guitar.)</p> <p>Have students choose partners, or assign partners, and distribute pencil cases (or other stiff, open boxes) and several rubber bands to each pair. Have them place one rubber band on each pencil box, then each pluck their own rubber band and decide which one is higher/lower, or if they are the same. The teacher circulates around the class, randomly asking pairs to tell which is higher/lower. Encourage them to add more rubber bands. Optional: have students add rubber bands to their boxes and order them from lowest to highest in pitch.</p> <p>Literacy Activity: Learn and practice the word: <i>Pitch</i>. Use <b>Worksheet 2b</b></p> <p>Review the song "If you're happy and you know it," using clapping. Then add another verse: "If you're happy and you know it, pluck your guitar."</p> <p>Closing Routine</p> |
| <p><i>Explanation</i></p> <ul style="list-style-type: none"> <li>● <i>Students explain their understanding of concepts and processes.</i></li> <li>● <i>New concepts and skills are introduced as conceptual clarity and cohesion are sought.</i></li> </ul> | <p><b>Making sounds</b></p> <p>Opening routine</p> <p>Bring out the two drums you have made (see materials), and begin talking about the larger, lower drum. <b>Ppt 2-3</b></p> <p>Be sure to have something to strike the drum with, such as a chopstick or the eraser end of a wooden pencil.</p> <p>T: <i>I have made a drum, and I think it can make a sound. Who can show me a way to make a sound with my drum?</i> (Hold the drum and call on a volunteer, who will likely hit the drum with the available pencil or chopstick.)</p> <p>(Student) <i>hit the drumhead with the stick.</i></p> <p>T: <i>Did that make a sound?</i></p> <p>Ss respond.</p> <p>T: <i>Right, it made a sound. So...that means that something...</i> (Students supply <i>vibrates</i>. Prompt as necessary.) (Hit the drum again.) <i>Is the drumhead vibrating? Can you see it vibrate?</i></p>   |



**World Language-STEM MODULE COVERSHEET**  
**Good Vibrations/Sound**

| Key Elements   | Lesson 2 Procedures   |
|--|---|
|  | <p>T: <i>Let's see if we can feel it vibrate. Who wants to help?</i> (Select two volunteers.)<br/> T: <i>(Student 1 name), put your fingers very lightly on the drum, and (Student 2 name) hit the drum.</i><br/> T: <i>Class, ask _____ (Student 2), does the drumhead vibrate?</i><br/> Ss: <i>Does the drumhead vibrate?</i><br/> S2: <i>Yes, the drumhead vibrates.</i> (Prompt as necessary.)<br/> Repeat with additional student volunteers, prompting less and less each time. For additional practice, Teacher could ask S1 and/or S2 if they can see the drumhead vibrate.<br/> T: <i>(Taking the other drum.) This is another drum. I'm going to hit the drumhead of this drum. Tell me: is the pitch higher or lower?</i><br/> Ss: <i>Respond.</i><br/> T: <i>Right. So the vibration must be...</i> (Students supply <i>faster</i>. Prompt as necessary.)<br/> T: <i>When the vibration is slow, the pitch is low</i> (do hand gesture). <i>Look at the slow waves.</i> (Point to the slow wave picture.) <i>When the vibration is fast, the pitch is high</i> (do hand gesture). (Point to the fast wave picture.)<br/> T: <i>Pitch tells us how high or how low the sound is.</i> (Teacher does the gesture for high and low pitch and reminds students if they can't get the concept).<br/><br/> T: <i>Great! Let's add to our chant: <b>Ppt 2-4</b></i><br/> Repeat several times, in a call and response format.</p> <p style="text-align: center;"><i>Vibration is <u>fast</u>, (vibrate hand fast) the <u>pitch</u> is <u>high</u>; (Show high with hands)</i><br/> <i>Vibration is <u>slow</u>, (vibrate hand slow) the <u>pitch</u> is <u>low</u>. (Show low with hands)</i></p> <p>T: <i>Now let's do the whole chant together. Ppt 2-5</i></p> <p>Literacy Activity: Learn and practice the word: <i>high</i>. Use <b>Worksheet 2b</b></p> <p>Repeat the entire chant learned so far, using call and response and including the new lines.<br/> Closing routine.</p> |
| <p><i>Elaboration</i></p> <ul style="list-style-type: none"> <li>● <i>Activities allow students to apply concepts in contexts, and build on or extend understanding and</i></li> </ul> | <p><b>When I talk, or sing, or hum, my voice box vibrates like a drum</b><br/> Opening routine, ending with the "If you're happy" song. Add another line: "If you're happy and you know it, hit your drum."<br/><br/> T: <i>Let's sing the song one more time, and this time we'll try something. Put your hand on your throat, like this.</i> (Teacher demonstrates hand flat on the middle of the throat.)</p>  |

**World Language-STEM MODULE COVERSHEET**  
**Good Vibrations/Sound**

| Key Elements  | Lesson 2 Procedures   |
|---------------|---|
| <i>skill.</i> | <p>Students and teacher sing.</p> <p>T: <i>Do you feel anything with your hand?</i><br/> S: (May say they do, or some may even call it vibration.)<br/> T: <i>What we feel is vibration. Something is vibrating here in our throat! We call it the voice box. Did you all feel the vibration?</i><br/> S: Respond<br/> T: <i>Now let's hum our song. While we are humming, put your hand on your voice box. Can you feel the vibration? What is vibrating?</i><br/> S: <i>The voice box!</i> (Teacher prompts as necessary.)<br/> T: <i>Let's see. What can we do to make the voice box vibrate again?</i><br/> (Some children may have the idea of talking. If not, Teacher continues...)<br/> T: <i>Let's start to say our chant—feel the voice box.</i> (Teacher leads the first few lines of the chant.) <i>Did you feel the voice box vibrate?</i><br/> S: Respond.<br/> T: <i>So...the voice box vibrates when we talk, or when we .....(hesitate for students to provide either sing or hum) _____ Or when we ..... _____.</i><br/> <i>Can we make a sound when we whisper? Let's try it. Feel the voice box.</i><br/> T: (Whispering energetically, so as to be heard) <i>Let's count—1, 2, 3</i><br/> S: <i>1-2-3</i><br/> T: <i>Now can you hear me when I whisper?</i><br/> S: <i>Yes.</i><br/> T: <i>I can hear you, too. Does your voice box vibrate when you whisper?</i><br/> S: <i>No!</i><br/> T: <i>That's true! I can't feel my voice box vibrate. But something must be vibrating, or you couldn't hear me. Let's try something. I need a helper.</i><br/> (Teacher calls on a volunteer and hands the volunteer a tissue.) <i>Here, _____(name of Student), please hold this tissue in front of my mouth when I whisper.</i> (Teacher whispers something the children will understand, such as my voice box doesn't vibrate.) <i>Class, what happens to the tissue?</i><br/> S: <i>Various responses—maybe even It vibrates.</i><br/> T: <i>The tissue vibrates because the air vibrates, even when I whisper.</i><br/> (Teacher shakes the hands to demonstrate vibration.)<br/> T: <i>You have learned so much about Sound! What are some of the special words we now know about sound?</i><br/> S: <i>Pitch, high, low, fast, slow, etc.</i> (Teacher uses gestures to prompt, as necessary.)<br/> T: <i>Correct! What does pitch tell us?</i><br/> S: <i>Pitch tells us how high or low the sound is.</i><br/> T: <i>We have some more to add to our chant now.</i> (call and response, line by line, several times) <i>When I talk, or sing, or hum, my voice box vibrates, (touch hand to throat) like a drum (vibrate hand up and down).</i></p> <p><i>Now let's do the whole chant so far:</i> (Continue with call and response.</p> |

**World Language-STEM MODULE COVERSHEET**  
**Good Vibrations/Sound**

| Key Elements   | Lesson 2 Procedures  |
|--|--|
|  | <p><b>Ppt 2-5</b></p> <p><u>Sound, sound, what is sound?</u><br/> <u>What makes all the sounds around?</u><br/> <u>Something vibrates,</u><br/> <u>makes a wave that</u><br/> <u>travels, travels</u><br/> <u>through the air</u><br/> <u>to the ear.</u></p> <p><u>Sound, sound, what is sound?</u><br/> <u>Vibration makes the sounds around.</u></p> <p><u>Vibration is fast, the pitch is high;</u><br/> <u>Vibration is slow, the pitch is low.</u></p> <p>And <u>when I talk, or sing, or hum,</u><br/> <u>My voice box vibrates like a drum.</u></p> <p><u>Sound, sound, what is sound?</u><br/> <u>Vibration makes the sounds around.</u></p> <p>Literacy Activity: Learn and practice the word: <i>low</i>. Use <b>Worksheet 2b</b></p> <p>Closing Routine.</p>   |
| <p><i>Evaluation</i></p> <ul style="list-style-type: none"> <li>• <i>Students assess their knowledge, skills and abilities. Activities permit evaluation of student development and lesson effectiveness.</i></li> </ul> | <p><b>We learned about different sounds.</b></p> <p>Opening Routine</p> <p>T: <i>In this lesson we learned about sound and pitch. What kind of vibration makes a high pitch?</i><br/> S: <i>(fast vibration).</i><br/> T: <i>Right! What do you think a wave for a fast vibration and high pitch look like? Show me with your hands.</i><br/> Students make fast wave motion.</p> <p>T: <i>And a wave for low pitches and slows vibration, what would that look like?</i><br/> Students make slow wave motion.<br/> T: <i>Correct! Just to be clear, when the wave looks like this (draw a wave on the board that is far apart for low pitch) what will the pitch be?</i><br/> S: <i>Low Pitch</i><br/> T: <i>When the wave looks like this (draw a wave on the board that is very close together for high pitch) what will the pitch be?</i><br/> S: <i>High Pitch.</i><br/> T: <i>So we have learned a lot! Sound has pitch. The pitch could be high (make</i></p> |

**World Language-STEM MODULE COVERSHEET**  
**Good Vibrations/Sound**

| Key Elements | Lesson 2 Procedures   |
|--------------|---|
|              | <p>a “high pitch sound” and show high with your hand.) <i>or it could be low (make a low pitch sound and show low with your hand)</i></p> <p>T: <i>Who remembers our sign for vibration? Then let’s say it: “When the pitch is high, the vibration is fast.”</i></p> <p>S: <i>“When the pitch is high, the vibration is fast.”</i></p> <p>T: <i>“When the pitch is low, the vibration is slow.”</i></p> <p>S: <i>“When the pitch is low, the vibration is slow.”</i></p> <p>T: <i>So, let’s think of a whistle... does it have a high or low pitch. (show high and low with your hands)</i></p> <p>S: <i>high</i></p> <p>T: <i>That’s right; the whistle has a high pitch sound. And the vibration of the sound of the whistle is ... (wait for response, if they don’t offer answer, give them the choices fast or slow)</i></p> <p>S: <i>Fast</i></p> <p>T: <i>Correct! The vibration is fast. Because when the pitch is _____ (wait for students to fill the blank) the vibration is _____. Let’s say it again.</i></p> <p>S: <i>When the pitch is high the vibration is fast. And a thunder? High or low pitch?</i></p> <p>S: <i>Low</i></p> <p>T: <i>Correct! Thunder has low pitch. And the vibration is ...?</i></p> <p>S: <i>Slow</i></p> <p>T: <i>Correct! Because when the pitch is low the vibration is slow.</i></p> <p>T: <i>Let’s all sing a high note (model and have class join in). When I sing a high note the voice box vibrates...</i></p> <p>Ss: <i>(fast)</i></p> <p>T: <i>And when I sing a low note? How does the voice box vibrate?</i></p> <p>Ss: <i>(slow)</i></p> <p>T: <i>Correct! Because when the pitch is low the vibration is slow. Our chant helps us remember all the things we have learned about sound so far. Repeat the entire chant learned so far, using call and response and gestures.</i></p> <p>T: <i>Everyone did a great job today! In this lesson, we learned about different sounds. We heard our rubber band guitars make sounds with a higher pitch and a lower pitch. We heard my drums make a higher pitch and a lower pitch.</i></p> <p>Closing routine</p> |

**World Language-STEM MODULE COVERSHEET**  
**Good Vibrations/Sound**

| Teacher Reflections on Lesson 2 – <i>[lesson two title/]</i> |  |
|--|--|
| <i>What worked well?</i>                                     |  |
| <i>What did not work well?</i>                               |  |
| <i>What would I do differently?</i>                          |  |
| <i>Other comments or notes</i>                               |  |

# World Language-STEM MODULE COVERSHEET

## Good Vibrations/Sound

### Lesson 3 – Sounds we like and don't like *Sounds we like and we don't like*

| Lesson 3 of 5                         |  | Duration: 30 Minutes |
|---------------------------------------|--|----------------------|
| <i>Objectives</i>                     | <p><b>I can:</b></p> <p>Oral language:</p> <ul style="list-style-type: none"> <li>• I can talk about the sounds that I like</li> <li>• I can talk about the sounds that my friends like</li> </ul> <p>Literacy:</p> <ul style="list-style-type: none"> <li>• I can tell which sounds the whole class likes best and which sounds the whole class dislikes</li> <li>• Vocabulary: volume, one instrument (student's choice) hit, blow, pluck,</li> </ul> <p>STEM and Other Subject Areas:</p> <ul style="list-style-type: none"> <li>• I can describe different sounds using the concepts of pitch and volume.</li> </ul> |                      |
| <i>Vocabulary and Expressions</i>     | <p><b>Content obligatory language:</b><br/><i>Volume, Pitch (Recycled), musical instrument<br/>Gong, drum, whistle, maraca, obo, buzzer</i></p> <p><b>Content Compatible languages:</b><br/><i>Pretty, I like<br/>I don't like<br/>Do you like<br/>Why do you like...</i></p>  |                      |
| <i>Materials/ Resources</i>           | <ul style="list-style-type: none"> <li>○ Maraca, gong, hand drum, whistle oboe instruments or power point with pictures and sounds</li> <li>○ Power Point</li> <li>○ <b>Worksheet 3a</b> – Sounds I like and do not like</li> <li>○ <b>Worksheet 3b</b> – Sounds that I like and sounds that I do not like</li> <li>○ <b>Worksheet 3c</b> – Sounds my friend likes and does not like</li> </ul>  |                      |
| <i>Lesson Storyline and Core Text</i> | <p>Students learn that sound is a very important part of our life. You can hear sound everywhere. Some sounds are pleasant and some are not so pleasant. Then students explore one of the beautiful sounds: music. They will know some musical instruments that make different kinds of sounds.</p> <p><i>Core text:</i></p> <p style="text-align: center;"><i>What's that? Can you hear anything?<br/>What do you hear?<br/>We all have sounds we like.<br/>We also have sounds we don't like.<br/>Now let's hear some sounds.</i></p>  |                      |

## World Language-STEM MODULE COVERSHEET

### Good Vibrations/Sound

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|  | <p><i>We are going to explore sounds from this super bag of sounds.<br/>On your sheets, draw something that will make some sound you like and some sound you don't like.<br/>There are so many different sounds.<br/>I like music! Do you like music?<br/>What sound do you like?<br/>What sound do you dislike?<br/>I don't like...<br/>Tell me about the sound you don't like?<br/>The pitch is too low. It's not nice.<br/>Now I will ask the student to interview me.<br/>Do you want to interview me?</i></p> |
|--|--|

| Key Elements   | Lesson 3 Procedures - <i>Sounds we like and we don't like</i>   |
|--|---|
| <p><i>Engagement</i></p> <ul style="list-style-type: none"> <li>● <i>Object, event or question used to engage students.</i></li> <li>● <i>Connections facilitated between what students know and can do</i></li> </ul> | <p><b>Review what we have learned about sound</b></p> <p>Opening routine<br/> T: <i>We learned so much about sound! What have we learned? Look at what I am doing.</i><br/> T: (Teacher has hand on ear as if trying to hear something, gives the students the quiet cue still with hand on ear) <i>What's that? Can you hear anything? What do you hear?</i> (Pause to see if any student says the word "Sounds")<br/> S: <i>Sound!</i></p> <p>T: (Teacher shakes hand.) <i>What is that? What makes sound?</i><br/> S: <i>Vibration!</i><br/> T: <i>Great! Vibration can be...</i> (Shake the hands very fast)<br/> S: <i>Fast!</i><br/> T: <i>Vibration can also be...</i> (Shake the hands very slowly)<br/> S: <i>Slow!</i><br/> T: <i>Excellent! Fast vibration will give the sound...</i>(Show high using hands)<br/> S: <i>High pitch!</i><br/> T: <i>Slow vibration will give the sound...</i>(Show low using hands)<br/> S: <i>Low pitch!</i><br/> T: <i>Great! Let's chant together. Vibration is fast...</i><br/> (Students chant.)<br/> T: <i>Let's just be quiet and listen again.</i> (No talking). <i>Wow, I hear a lot of sounds! Do you hear sounds? Now I will give you a little assignment. I want you to get a worksheet and draw something important that makes sounds in your life.</i><br/> (Hand out the worksheets to students.)<br/> T: <i>Let me draw something here.</i> (Teacher can draw something like a bird)<br/> <i>What kind of sound it makes?</i><br/> S: (Do the sounds of birds).</p> |

## World Language-STEM MODULE COVERSHEET

### Good Vibrations/Sound

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| Key Elements   | Lesson 3 Procedures - <i>Sounds we like and we don't like</i>   |
|  | <p>T: <i>Great. Now please draw something and tell us what sounds you have!</i><br/>(Students share their pictures and what sound they can make)</p> <p>T: <i>Students, there are so many different kinds of sounds in our life! Let's keep them in mind! Next time we'll find out some sounds we like and some sounds we don't like.</i></p> <p>Closing routine, including song</p>  |
| <p><i>Exploration</i></p> <ul style="list-style-type: none"> <li>● <i>Objects and phenomena are explored.</i></li> <li>● <i>Hands-on activities, with guidance.</i></li> </ul> | <p><b>The Sound we like</b></p> <p>Opening routine, including song or chant</p> <p>T: (Teacher plays some music in the classroom.) <i>I thought I'd play some music for us, because I like music. Do you like music?</i></p> <p>S: <i>Yes!</i></p> <p>T: <i>Is there any sound you like? If you don't know how to say it, you can act it out!</i></p> <p>T: <i>Is there any sound you don't like? If you don't know how to say it, you can act it out too!</i></p> <p>(Students act out the sound they don't like.)</p> <p>T: <i>Thanks! Do you know what sound I don't like? I don't like the sound of screaming. (Teacher makes the sound of screaming.) Do you ever scream?</i></p> <p>(Students might say yes.)</p> <p>T: <i>Yes. We all might scream sometimes. Do you know why I don't like screaming?</i></p> <p>S: <i>Too loud!</i> (Teacher shows big using hands)</p> <p>T: <i>Yes it's too loud. Sounds can be loud or not loud. We call that volume. Volume is the loudness of a sound.</i></p> <p>T: <i>Excellent! How about the screaming sound's pitch?</i></p> <p>S: <i>High!</i></p> <p>T: <i>Yes! I don't like sound that is too loud and high pitch. It's very unpleasant. How about the sounds you like and the sound you don't like?</i></p> <p>Students give a variety of reactions. Ask some volunteers to try to describe some sound. Help them to use volume and pitch to describe sound.</p> <p>T: <i>We all have sounds we like. We also have sounds we don't like. Now let's hear some sounds. We are going to explore sounds from this super bag of sounds. On your sheets, draw something that will make some sound you like and some sound you don't like.</i></p> |



## World Language-STEM MODULE COVERSHEET

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| Key Elements   | Lesson 3 Procedures - <i>Sounds we like and we don't like</i>   |
|  | <p>Use YouTube <a href="http://www.youtube.com/watch?v=fbDFAaPfl28">http://www.youtube.com/watch?v=fbDFAaPfl28</a></p> <p><i>First time - Play the sound only</i></p> <p><i>Stop and ask students</i></p> <ol style="list-style-type: none"> <li>a. <i>to identify the sound</i></li> <li>b. <i>If they like/dislike the sound</i></li> </ol> <p><i>2<sup>nd</sup> time – show the video</i></p> <p>Teacher distribute handout, <b>Worksheet 3a</b>, students can draw or write down the sound they like or don't like.</p> <p>T: <i>I will collect all your worksheets so you don't lose them. Later we'll use these worksheets again and talk about the sounds you like and the sounds you don't like.</i></p> <p>Closing routine, including chant</p>  |
| <p><i>Explanation</i></p> <ul style="list-style-type: none"> <li>● <i>Students explain their understanding of concepts and processes.</i></li> <li>● <i>New concepts and skills are introduced as conceptual clarity and cohesion are sought.</i></li> </ul> | <p><b>Let's listen to some instruments</b></p> <p>Opening routine, including song</p> <p>T: <i>Last time we talked about sounds in our life. There are sounds we like. There are sounds we don't like. Can you tell me what sounds you like and what sounds you don't like?</i></p> <p><b>Note:</b> If students can't get the answers, teacher reminds students to look at the worksheets they worked on last time. Students volunteer to talk about the sounds they like and the sounds they don't like.</p> <p>T: <i>Good. There are so many different sounds. I like music! Do you like music?</i></p> <p>(Many students will say yes.)</p> <p>T: <i>Music is a type of sound. We need musical instrument to make music. Do you know any musical instrument?</i></p> <p>T: (Display the drum made for an earlier lesson.) <i>Look at this! I made this musical instrument! What is it?</i></p> <p>S: <i>It's a drum!</i></p> <p>T: <i>Yes! A drum is a type of musical instrument. Do you like the drum?</i></p> <p>S: <i>yes or no.</i></p> <p>(Teacher shows several pictures of some musical instruments.)</p> <p>T: <i>What is this? I like this one! This is a violin! Do you like to hear a violin?</i></p> <p>S: (some students may indicate they play the violin).</p> <p>T: <i>I know some of you know how to play the violin, too! That's great!</i></p> |

## World Language-STEM MODULE COVERSHEET

### Good Vibrations/Sound

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| Key Elements  | Lesson 3 Procedures - <i>Sounds we like and we don't like</i>   |
|   | <i>There are a lot of musical instruments that make different sounds. Let's listen to a few of these sounds.</i>  |
| <p><i>Elaboration</i></p> <ul style="list-style-type: none"> <li>• <i>Activities allow students to apply concepts in contexts, and build on or extend understanding and skill.</i></li> </ul> | <p>T: <i>You know, there are more musical instruments in _____ (the target language and culture) and other cultures. Let's get to know some of them.</i></p> <p><b>Note:</b> Teacher proceeds to make each sound from the power point presentation. This is an opportunity to pick culturally relevant artifacts. Our 5 sounds will be Gong, Maraca, Whistle, Hand Drum, and Oboe. Teacher uses flipchart or power point with pictures and sounds to demonstrate for students. After the whistle, the teacher should point out that a whistle isn't always considered a musical instrument, but it is sometimes used in music. If there is no access to these technologies then the actual instruments will be needed. Let the students listen to all the sounds first. Then, on the second time through, while the teacher is making the sounds the students will be filling in <b>worksheet 3b</b> with the sounds that they like and the ones that they do not.</p> <p>For each sound use the following pattern:</p> <p>T: <i>This one is called a <u>Gong</u>. How would you describe the sound?</i></p> <p>S: <i><u>Loud</u>. <u>Low</u> pitch.</i></p> <p>T: <i>(Mark whether you like it or you don't like it.</i></p> <p>(Teacher repeats the same procedure and utterances for other musical instruments.)</p> <p>T: <i>We have learned so many musical instruments! The one I like the most is always _____. How about you? I want to see what instrument our class likes the most!</i></p> <p>T: <i>Let's find out what our class likes the best. I have a chart here with all the sounds we heard. First, write your name on the paper square I am giving you. When we come to the one you liked best, bring the square up to the chart and put it by that sound.</i></p> <p>(When the teacher comes to the sound that the student liked the best, they will put their construction paper square on to the chart if it is low tech or fill it in the with "pen" on the smart board if it is high tech.)</p> <p>T: <i>Which instruments do we like the most? I will write the sentence on the board:</i></p> <p><i>Our class likes the sound of the _____ the most.</i></p> <p>Closing routine</p> |
| <p><i>Evaluation</i></p> <ul style="list-style-type: none"> <li>• <i>Students assess</i></li> </ul>   | <b>Interview my partner about the sound he/she likes</b>  |

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**Good Vibrations/Sound**

| Key Elements   | Lesson 3 Procedures - <i>Sounds we like and we don't like</i>   |
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| <p><i>their knowledge, skills and abilities. Activities permit evaluation of student development and lesson effectiveness.</i></p> | <p>Opening routine</p> <p>T: <i>In this lesson, we learned that there are sounds that we like. Can you tell me some sounds that are nice?</i></p> <p>Students give responses.</p> <p>T: <i>Can you tell me some sounds that we don't like?</i></p> <p>Students give responses.</p> <p>T: <i>Today we are going to interview a partner about which sounds they like or don't like and record that on your sound lab sheet. <b>Worksheet 3c</b></i></p> <p>T: <i>I want someone to help me so we can practice this interview.</i></p> <p>T (Work with a student volunteer): <i>What sound do you like?</i></p> <p>S: <i>I like...</i></p> <p>T: <i>What sound do you dislike?</i></p> <p>S: <i>I don't like...</i></p> <p>T: <i>Tell me about the sound you don't like?</i></p> <p>S: <i>The pitch is too low. It's not nice.</i> (And any possible answers.)</p> <p>T: <i>Now I will ask the student to interview me. Do you want to interview me?</i></p> <p>(Teacher will be interviewed by the student. Try to talk about the pitch and volume.)</p> <p>Repeat the interview with another student; then have the whole class ask you the questions. Then have the whole class ask another volunteer the questions.</p> <p>(Teacher can decide how partners are assigned either by the teacher or by the students based on class knowledge. The teacher should circulate throughout the room and ensure that students are remaining on task and working through in the target language. Students will finish <b>Worksheet 3c</b>)</p> <p>Closing routine</p> |

**World Language-STEM MODULE COVERSHEET**  
**Good Vibrations/Sound**

| Teacher Reflections on Lesson 3 – <i>[lesson three title]</i> |  |
|---|--|
| <i>What worked well?</i>                                      |  |
| <i>What did not work well?</i>                                |  |
| <i>What would I do differently?</i>                           |  |
| <i>Other comments or notes</i>                                |  |

# World Language-STEM MODULE COVERSHEET

## Good Vibrations/Sound

### Lesson 4 – We can make sound *we can make sound*

| Lesson 4 of 5 - <i>We can make sound</i> |   | Duration: 30 Minutes |
|--|---|----------------------|
| <i>Objectives</i>                        | <p><b><i>I Can:</i></b></p> <p>Oral language:</p> <ul style="list-style-type: none"> <li>• Name my instrument</li> <li>• Describe the sound using important concepts of sound including volume and pitch.</li> </ul> <p>Literacy:</p> <ul style="list-style-type: none"> <li>• Vocabulary: shake, blow, rub</li> </ul> <p>STEM and Other Subject Areas:</p> <ul style="list-style-type: none"> <li>• Explain different ways of instruments making sounds.</li> <li>• Make an instrument that produces sound</li> <li>• Identify the sound that the instrument makes</li> <li>• Identify the pitch of my instrument</li> </ul> |                      |
| <i>Vocabulary and Expressions</i>        | <p><b>Content obligatory language:</b></p> <p><i>Hitting instrument</i></p> <p><i>Shaking instrument</i></p> <p><i>Pulling/plucking instrument</i></p> <p><i>Blowing instrument</i></p> <p><i>Kazoo, Güiro, Guitar, Maraca, Oboe</i></p> <p><i>Travel , Hitting, Shaking, Blowing, Pulling/plucking</i></p> <p><b>Content Compatible languages:</b></p> <p><i>Play (instrument)</i></p>   |                      |
| <i>Materials/Resources</i>               | <ul style="list-style-type: none"> <li>• See list of instrument instructions for all necessary materials</li> <li>• Recorder instrument</li> <li>• It would be very helpful to have parents or other assistants come in to help with the instrument construction near the end of this lesson.</li> <li>• <b>Worksheet 4a</b> – Instruction for Mr. Music puppet</li> <li>• <b>Worksheet 4b</b> - Assessment</li> <li>• <b>Worksheet 4c</b> – Instructions for Making Instruments</li> </ul>   |                      |
| <i>Lesson Storyline and Core Text</i>    | <p>Students meet Mr. Music who knows a lot about music, musical instruments, and sound. He wants students to have a concert with him. For that, students must understand how musical instruments make sound. Then they can make their own musical instruments and use the instruments to make sounds in different pitches and volumes. Then they will play some music in a concert.</p>   |                      |

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|  | <p>Core Text</p> <p><i>We have a guest today.<br/>         Let me introduce him to you!<br/>         His name is Mr. Music!<br/>         Can you say Hi to Mr. Music?<br/>         Wow, you learned a lot!<br/>         I am so impressed!<br/>         I am here because I want to have a music lesson with you.</i></p> <p><i>I <u>make vibration</u> when I <u>blow</u>, (Acting out blowing)<br/>         or when I <u>hit something just so.</u> , (Acting out hitting)<br/>         Sometimes I <u>rub</u>, or <u>pluck a string</u>; , (Acting out rubbing and plucking)<br/>         Sometimes I <u>just shake everything.</u> , (Acting out shaking)<br/> <u>Sound, sound, what is sound?</u><br/> <u>Vibration makes the sounds around.</u></i></p> |
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| Key Elements   | Lesson 4 Procedures - <i>We can make sound</i>  |
| <p><i>Engagement</i></p> <ul style="list-style-type: none"> <li>● <i>Object, event or question used to engage students.</i></li> <li>● <i>Connections facilitated between what students know and can do</i></li> </ul> | <p><b>Mr. Music is here</b></p> <p>Teacher prepares the music puppet. It can be any puppet with a notation symbol glued on top of it.</p> <p>Opening routine</p> <p>T: <i>We have a guest today. Let me introduce him to you!</i> (Shows the puppet to the student.) <i>His name is Mr. Music! Can you say Hi to Mr. Music?</i></p> <p>S: <i>Hello, Mr. Music!</i></p> <p>Mr. Music: <i>Hello everyone! Nice to meet you! I am so glad that you are learning about sound! You know, I love to make music. Music is a type of sound. What have you learned about sound now?</i></p> <p>S: (Give a variety of responses. Teacher encourages students to talk about the important concepts about sound such as vibration, pitch, and musical instruments.)</p> <p>M: <i>Wow, you learned a lot! I am so impressed! I am here because I want to have a music lesson with you.</i></p> <p>T: <i>We learned about so many musical instruments. What instruments do our class like the most?</i></p> <p>Ss: <i>respond.</i></p> <p>M: <i>I like all the instruments! Different instruments can work together to make</i></p> |

**World Language-STEM MODULE COVERSHEET**  
**Good Vibrations/Sound**

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| Key Elements   | Lesson 4 Procedures - <i>We can make sound</i>  |
|  | <p><i>music in a concert!</i> (Teacher shows several pictures of a concert, including local concerts, if possible. <b>Ppt 4-1.</b>) <i>Has anyone here attended a concert? Has anyone here been in a concert?</i> (If necessary, give examples of local or school concerts and ask if any of the students were there.)</p> <p>Students give a variety of response.</p> <p>M: <i>In a concert people make music for an audience, for the people who come to listen. Sometimes they sing, or they play instruments, in a group or by themselves. I love concerts. It is so nice to make beautiful sounds together!</i></p> <p>T: <i>A concert is a good idea. But I think we should find out how instruments work. Let me ask all the students a question: what instrument do you play? Who knows how to play violin?</i></p> <p>(Students who know how to play violin <i>raise their hand</i>. Repeat with the same procedure and utterances for other instruments such as piano, guitar, maraca, drums, and flute.)</p> <p>M: <i>Wow. You can play instruments! You can make musical sounds! I wish I could see how you play.</i></p> <p>T: <i>I have an idea. Next time let's go to the music room. There are musical instruments in the music room.</i></p> <p>M: <i>Or you can bring your own instrument to play for us. I will see you next time! I am so excited!</i></p> <p>T: <i>We are happy too! We all love music!</i></p> <p>Closing routine</p> |
| <p><i>Exploration</i></p> <ul style="list-style-type: none"> <li>● <i>Objects and phenomena are explored.</i></li> <li>● <i>Hands-on activities, with guidance.</i></li> </ul> | <p><b>Play the instruments</b></p> <p>(Teacher takes students to the music room if possible.)</p> <p><b>Opening routine</b></p> <p>M: <i>Hello teacher and students!</i></p> <p>T: <i>Hello Mr. Music. Thank you for being here.</i></p> <p>M: <i>I wouldn't miss it! I know today some students are going to play their instruments!</i></p> <p>T: <i>Yes! Is there anyone who brought your instrument? What do you have?</i></p> <p>(Students might bring different kinds of instrument and play some song that they know. The total time that students play their instrument should not be longer than 6-8 minutes. )</p> <p>M: <i>Wow! I love all the music. And I love all the instruments. I want to ask you a question: do you know how these instruments make these beautiful</i></p>   |

**World Language-STEM MODULE COVERSHEET**  
**Good Vibrations/Sound**

| Key Elements | Lesson 4 Procedures - <i>We can make sound</i>   |
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|              | <p><i>sounds?</i></p> <p>T: <i>That's a good question! How what is it that makes sound?</i></p> <p>S: <i>Vibration makes sound.</i></p> <p>T: <i>Great! But, what makes vibration?</i></p> <p>M: <i>Let me show you! (T shakes the maraca.) How did (Teacher name) play the maraca to make sound?</i></p> <p>T: <i>I see. That's shaking! Students, can you all shake, shake, shake.</i></p> <p>(Students do the action of shaking.)</p> <p>M: <i>Yes! I make vibration when I shake, shake, shake.</i></p> <p>At this point go back to every instrument students brought to play, and identify how the sound was produced.</p> <p>T: <i>How about (any wind instrument)? (Shows students the instrument and how to make the sound.)</i></p> <p>M: <i>ah, this one is fun! I make vibration when I blow!</i></p> <p>(Teacher does the action of blowing.)</p> <p>T: <i>Let's try to blow together! (Students do the action of blowing.)</i></p> <p>M: <i>We can blow and shake to make sounds! How about other ways?</i></p> <p>T: <i>How about this guitar (or other string instrument)?</i></p> <p>M: <i>This one is good too! You pluck a string!</i></p> <p>T: <i>Students, we make vibration when we shake. We make vibration when we blow. Now can you describe how to make sound using guitar?</i></p> <p>(If students can't find the answer right away. Ask students to say the sentence together with the teacher.)</p> <p>S: <i>We make vibration when we pluck a string!</i></p> <p>M: <i>You kids are really good! I also have a cute xylophone here! Many kids like it. How do you make the sound using this xylophone? Can you show me?</i></p> <p>S: (Do the hitting action.)</p> <p>M: <i>That's right! We make vibration when we ... when we...can you help me?</i></p> <p>T &amp; S: <i>We make vibrations when we hit something!</i></p> <p>T: <i>What else can we hit to make a vibration?</i></p> <p>S: (various answers)</p> <p>M: <i>This is a guiro, another instrument that is fun to play. Can you guess how to play this one?</i></p> |



**World Language-STEM MODULE COVERSHEET**  
**Good Vibrations/Sound**

| Key Elements   | Lesson 4 Procedures - <i>We can make sound</i>  |
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|  | <p>Ss: (various responses)</p> <p>M: <i>Look—I rub it with a stick! Show me how to do that.</i></p> <p>Ss: (Make rubbing motion with Maestro)</p> <p>T: <i>Today we learned a lot about how instruments make sound. Now we can add some more to our chant: (use call and response, with actions)</i></p> <p style="text-align: center;"><i>I <u>make</u> <u>vibration</u> when I <u>blow</u>,<br/> or when I <u>hit</u> something <u>just so</u>.<br/> Sometimes I <u>rub</u>, or <u>pluck</u> a <u>string</u>;<br/> Sometimes I <u>just shake</u> <u>everything</u>.</i></p> <p>M: <i>I think it’s really fun to learn how each instrument makes sounds. We know a lot now! Maybe we can learn how to make our own instruments!</i></p> <p>T: <i>That’s a great idea! Actually you already saw how I made a drum. How do we make a sound with a drum?</i></p> <p>S: <i>Hitting!</i></p> <p>T: <i>And what vibrates when we hit the drum?</i></p> <p>S: <i>(the drum head)</i></p> <p>T: <i>Yes! Next time we’ll make our own instruments!</i></p> <p>M: <i>Wow. I can’t wait. I want to help you to make your own instruments.</i></p> <p><b>Closing routine, including entire chant, Ppt 4-2a, 4-2b, 4-2c</b></p> |
| <p><i>Explanation</i></p> <ul style="list-style-type: none"> <li>● <i>Students explain their understanding of concepts and processes.</i></li> <li>● <i>New concepts and skills are introduced as conceptual clarity and cohesion are sought.</i></li> </ul> | <p><b>Opening routine, including song</b></p> <p>T: <i>Hello students! Hello Mr. Music!</i></p> <p>S: <i>Hello!</i></p> <p>M: <i>Hello! Nice to see you again! I know that you are making your own instruments.</i></p> <p>T: <i>Yes! We learned five different ways to make vibration and sound. What are they?</i></p> <p>S: <i>Blowing rubbing, plucking, shaking, and hitting.</i></p> <p>T: <i>Do you remember the instrument we already made? The little...</i></p> <p>S: <i>Guitar.</i></p> <p>T: <i>How did we make sound with the little guitar?</i></p> <p>S: <i>You pluck the string/rubber band to make sound!</i></p> <p>T: <i>How do we make a sound with the drum?</i></p> <p>S: <i>You hit the drumhead to make sound.</i></p> <p>T: <i>So we have already made one musical instrument, and we have also played with the drum!</i></p> <p>M: <i>If we want to have a concert, we should have more musical instruments! And we should have hitting, shaking, blowing, pulling/plucking instruments!</i></p>  |

**World Language-STEM MODULE COVERSHEET**  
**Good Vibrations/Sound**

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| Key Elements   | Lesson 4 Procedures - <i>We can make sound</i>  |
|  | <p>T: <i>Okay! We'll have five stations. Station One is for an oboe. Station Two is for a guiro. Station Three is for a Kazoo. Station Four is for Maracas. Station Five is for a Drum.</i></p> <p>T: <i>Let's go to each station. I will show you how to make these instruments. Tomorrow we will decide what instruments you are going to make.</i></p> <p>(As students walk to each station, the teacher shows a sample of the instrument, plays it, and explains how the sound is produced and what is vibrating. Then the teacher gives a brief demonstration of how to make the instrument, describing each step along the way.) After each station, review the information with the students and have them pantomime the actions that produce the sound on each instrument:</p> <p style="padding-left: 40px;">oboe: blow<br/> drum: hit<br/> guiro: rub<br/> maracas: shake<br/> kazoo: sing or hum</p> <p>After the demonstrations, give each child three squares of paper, numbered 1, 2 and 3. Have children write their names on the squares of paper. Then place the instruments they will make the next day in a row on a desk or table in the front of the room.</p> <p>T: <i>Please put your number 1 slip of paper in front of the instrument you would most like to make. Put the number 2 slip of paper in front of your second choice of instrument. Put the number 3 slip of paper in front of your third choice. Tomorrow we will try to make one or two instruments per person, and I will try to give everyone a chance to make one of the instruments they want most. While we are voting, let's say our chant together.</i></p> <p>Continue to use call and response, because part of the chant is new. Have the children walk past the instruments and deposit their slips, pretending that their choices are a big secret!</p> <p><b>Closing routine.</b></p> |
| <p><i>Elaboration</i></p> <p><i>Activities allow students to apply concepts in contexts, and build on or extend understanding and skill.</i></p> | <p><b>Making our own instruments</b></p> <p><b>Note:</b> This class will primarily be devoted to making individual instruments. Depending on the time available, it may be possible for students to make more than one instrument, so that each child makes at least one instrument that is their first or second choice. For the concert, children may choose to play an instrument that they made themselves, possibly even the guitar, or another instrument made by a different child. Instruments that the children made, however, should be theirs to take home and children should have the first chance to play the instrument that they made themselves.</p> <p><b>Opening routine, including song with all new instruments added</b></p>  |

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**Good Vibrations/Sound**

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| Key Elements   | Lesson 4 Procedures - <i>We can make sound</i>   |
|  | <p>T: <i>Today we'll begin making our own instruments. I will read the names for each instrument, and you will go to your station after all the names have been read.</i></p> <p><i>First, the oboe. How do we make the sound with an oboe?</i></p> <p>Ss: respond</p> <p>T: <i>This is the oboe team. They will all make oboes: (Read names)</i></p> <p>Continue this procedure for each of the instruments. When all the names have been read, continue:</p> <p><i>Work together so that everyone can make the very best instrument they can. If we finish in time, some of you can make a second instrument.</i></p> <p>During the work time, Mr. Music can circulate among the groups, asking about their projects:</p> <p>M: <i>What instruments are you making?</i><br/>         (Student volunteers talk about their instruments.)</p> <p>M: <i>That sounds so interesting. How do you make sound using your instrument?</i><br/>         (Student volunteers talk about how they make sound by hitting, blowing, rubbing, plucking, and shaking.)<br/>         (Students continue working on the instruments and should try to finish the instrument in this class.)</p> <p>M: <i>I definitely like all your instruments. Can you try to play them? Can you play different sounds?</i></p> <p>T: <i>What kinds of sounds we can play? You know music so well. Can you please teach us?</i></p> <p>M: <i>Sure! I love everything about music! Can you try to use your instrument to make sounds in different volume?</i></p> <p>T: <i>Hmm...so that means we can make loud sounds, and soft sounds.</i></p> <p>M: <i>Yes!</i><br/>         (Students try their instruments.)</p> <p>M: <i>For music, one thing is very very very important! Do you know what pitch is? Pitch is...?</i></p> <p>T: (show high and low using the hands to remind students.)</p> <p>S: <i>How high and low a sound is.</i></p> <p>M: <i>Yes! Can you try to play some high pitch sounds? Can you try to play some low pitch sounds?</i><br/>         (Students try their instruments.)</p> <p>M: <i>We'll practice more until we can make beautiful music!</i></p> <p>T: <i>Thank you, Mr. Music. We'll have a nice concert.</i></p> <p><b>Closing routine</b></p> |
| <p><i>Evaluation</i></p> <ul style="list-style-type: none"> <li>● <i>Students assess their knowledge, skills and abilities.</i></li> </ul> | <p>Opening routine</p> <p><b>Note:</b> This assessment can only be conducted after all the musical instruments are made and students know how to make different sounds using</p>   |

## World Language-STEM MODULE COVERSHEET

### Good Vibrations/Sound

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| Key Elements   | Lesson 4 Procedures - <i>We can make sound</i>   |
| <i>Activities permit evaluation of student development and lesson effectiveness.</i> | <p>their instruments. If many students can't finish making the musical instrument in the last class, this class period can be devoted to finish making the instrument, or to making a second instrument. This assessment can serve as the presentational assessment for the module. <b>Worksheet 4a</b></p> <p>T: <i>This is so much fun! We made so many instruments. Let's see what instruments you have.</i><br/>(Students display their instruments.)</p> <p>T: <i>Wow! I like all of them! We actually made musical instruments! That's so exciting! Let's work on this worksheet (Assessment 4a). We need to write down how our instruments work so all our friends know how we made an instrument.</i><br/>(Students observe their instrument, listen to the sounds, and fill in Assessment 4a.)</p> <p>T: <i>Can you please present your instrument to the whole class? I will present mine first!</i><br/>(Teacher models the presentation. Students should present the name of the instrument, how the instrument makes sound, and whether the instrument has high or low pitch.) Rotate among instruments, so that each instrument presented is different from the last.</p> <p>T: You did such a nice job! Let's chant together:</p> <p style="text-align: center;"><i>I make vibration when I blow, (Acting out blowing)</i><br/><i>Or when I hit something just so. , (Acting out hitting)</i><br/><i>Sometimes I rub, or pluck a string; , (Acting out rubbing and plucking)</i><br/><i>Sometimes I just shake everything. , (Acting out shaking)</i><br/><u>Sound, sound, what is sound?</u><br/><u>Vibration makes the sounds around.</u></p> <p><b>Closing routine</b></p> |

| Teacher Reflections on Lesson 4 – <i>We can make sound.</i> |  |
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| <i>What worked well?</i>                                    |  |
| <i>What did not work well?</i>                              |  |
| <i>What would I do differently?</i>                         |  |

## World Language-STEM MODULE COVERSHEET

### Good Vibrations/Sound

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| <i>Other comments or notes</i> |  |
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#### Lesson 5 - Assessment Task

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| Lesson 5 of 5                     | Duration: 30 Minutes  |
| <i>Objectives</i>                 | <p>In this lesson all the elements of the module come together in a performance. There should be several days of practicing for this performance. The elements of the performance include singing the song, in which all the students make the motions for each verse but only the group holding the instrument actually will make the sounds on their instrument. All the percussion instruments should beat an accompaniment to the song. The chant might be accompanied by all the instruments, one group for each of the verses, or students might take turns leading the chant, or different groups of students might perform different parts of the chant. Students should help make these decisions for their concert.</p> |
| <i>Vocabulary and Expressions</i> | No new vocabulary or expressions  |
| <i>Materials/Resources</i>        | <ul style="list-style-type: none"> <li>○ <b>Worksheet 5a</b> – Student Can-Do Statement</li> <li>○ Recorder</li> </ul>  |

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| <b>Performance Assessment</b>  |
| <b>Interpretive Task</b>   |
| <p>At the final performance, the teacher introduces the instruments and sound, students step forward based on how the sounds of their instruments are made and whether the pitch is high or low.</p> <p><b>Rubric 5a</b></p>   |
| <b>Presentational Task</b>   |
| <ul style="list-style-type: none"> <li>• Students perform (1) the “If you’re happy” song, and (2) the Sound Chant, while playing instruments that they have made.</li> <li>• Students describe the sound of their instruments and their characteristics, including pitch and frequency.</li> </ul> |
| <b>Interpersonal Task</b>  |
| <ul style="list-style-type: none"> <li>• Students interview one another during lesson 3 in order to see which sounds each likes and does not like.</li> <li>• Students interview one to two classmates to find out what their instrument looks like, how</li> </ul>                                |

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their instruments are made, and what the sound is. They will use the information they get from the interview to fill in the worksheet and these worksheets can be collected and published as a Class Instrument Book.

| Teacher Reflections on Lesson 5 – <i>Assessment Task</i> |  |
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| What worked well?  |  |
| What did not work well?                                  |  |
| What would I do differently?                             |  |
| Other comments or notes                                  |  |