



GASP Professional Development Project Performing Arts

Model Project: Exploring The Water Cycle Through Music!

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Introduction

Water has played a dominant role in the making of music for centuries. Works like Beethoven's *The Thunderstorm* and Camille Saint-Saëns's *Aquarium* mimic the movement of water, while Ferde Grofé's *Mississippi Suite* and many other pieces were inspired by a specific body of water. Water has also been the backdrop of a number of operas and musical theater productions including Gilbert and Sullivan's *H.M.S. Pinafore* and *Pirate of Penzance*, Rodgers and Hammerstein's *South Pacific* and Pietro Mascagni's *Iris*. Pieces have even been written to be performed on water including Handel's *Water Music* which was composed in 1717 for George I to be performed on the River Thames. Finally, a number of musical instruments including the Water Organ, Water Gong and Water Drums rely on water to function properly. It only makes sense that music can be identified and useful in the study of the water cycle!

In *Exploring The Water Cycle Through Music*, students will experience melody, rhythm, movement and drawing while learning the four major stages of the water cycle— Collection, Evaporation, Condensation and Precipitation. Students will learn to sing Tom Chapin's five-part contrapuntal piece (see *The Water Cycle Handout* and *The Wheel of the Water Handout* in **Supporting Resources**), identify musical terms that illustrate how the music mimics the movement of water in the water cycle, create their own movements to portray each part and draw Musical Maps to express and navigate each part visually.

Arts Area and Grade Level Focus

Performing Arts—Music with Movement and Visual Arts, K-2nd grade focus, with tips for scaling up for 3rd-8th grades

Connections To Elements of Art/Principles of Design

This project emphasizes **line**, **color**, **shape** and **form** by exploring the water cycle through music, dance (movement) and visual arts (drawing). The students will follow the **line** that is made by the melodies of each section or part of the song *The Wheel of the Water* and produce their version of the melodic contour by drawing Musical Maps (see *Musical Maps Handout* in **Supporting Resources**). The students will also interpret which **colors** to use in their Musical Maps based on the dynamics of the song section or part and also which stage of the water cycle is being reflected in the melody. The students will also create **shapes** with their bodies when they create movements in groups and on the page when drawing their Musical Maps that embody the **shapes** water makes while moving through the water cycle, the first being a circle in *The Wheel of the Water* ostinato. The students will exemplify the **form** water takes with their bodies when they create movements to embody each section of the song, and therefore each stage of the water cycle. The project emphasizes musical and visual **rhythm & movement** through singing, playing instruments and moving. The students will be directed by the teacher in moving to the steady beat but are also given the opportunity to discover the rhythm and movement of water moving in the various dynamic ways that are illustrated in the melodic contour and lyrics of the piece. The students will experience **harmony & unity** by singing each section or part of *The Wheel of the Water* separately and in groupings of more than two parts, creating a contrapuntal work as a whole.

Connections To Core Curriculum and Content Standards

Exploring the Water Cycle Through Music supports teaching and learning for K-5th grades in the Science through learning about water and water cycle; in English/Language Arts through developing reading comprehension skills by reading and interpreting the lyrics of *The Wheel of the Water*; in Physical Education through using synchronized movement to illustrate the music they hear and experience and by moving on a steady beat to *The Wheel of the Water* ostinato; and in Visual Arts through recreating the music they hear visually by creating Musical Maps.

Sciences—Physical and Earth

- Students will be engaged in observing, measuring and predicting the properties of materials and understand that can materials come in different forms (states) including solids, liquids and gases.
- Students will understand that Earth is composed of land, air and water and be engaged in learning that water on Earth moves between the oceans and land through the processes of evaporation and condensation.

English/Language Arts

- Students will be engaged in determining central ideas or themes of a text and analyzing their development and then summarizing the key supporting details and ideas.
- Students will analyze the structure of texts including how specific sentences, paragraphs and larger portions of the text (e.g., a section, chapter, scene or stanza) relate to each other and the whole.
- Students will read and comprehend complex literary and informational texts independently and proficiently.
- Students will integrate and evaluate content presented in diverse media and formats including visually and quantitatively as well as in words.

Physical Education

- Students will be engaged in demonstrating motor skills and movement patterns needed to perform a variety of physical activities.
- Students will be engaged in demonstrating knowledge of movement concepts, principles and strategies that apply to the learning and performance of physical activities.

Visual and Performing Arts

- Students will be engaged in processing, analyzing and responding to sensory information through the language and skills unique to Music, Dance and/or Visual Arts.
- Students will be engaged in creating, performing and participating in Music, Dance and/or Visual Arts.
- Students will be engaged in responding to, analyzing and making judgments about works of Music, Dance and Visual Arts.
- Students will be engaged in connecting and applying what is learned in Music, Dance and/or Visual Arts to learning in other art forms and subject areas and to careers.
- Student will gain an understanding the historical contributions and cultural dimensions of Music, Dance and/or Visual Arts.

Steps and Tips

The students will learn to sing Tom Chapin's contrapuntal five-part song *The Wheel of the Water* and create movements and drawings that will reinforce their study of the water cycle while becoming aware of the melodic contour and dynamics of the piece over the course of six lessons. The first five lessons will be similar in that they learn a section (or part) of the song, move to that section and draw a Musical Map to represent that section visually. The final lesson will consist of bringing all the sections or parts of the song together through singing and movement.

Step One: (30-40 minutes) Students will look at a diagram of the water cycle, discovering the circular motion and movement of water. Students will be introduced to the four major parts of the water cycle. Students will be taught **Part I** of Tom Chapin's *The Wheel of the Water* by call and response. Students will get in a circle holding hands and move to the steady beat in one direction and then the other while singing **Part I**. Students will be asked where the music "ends" and the teacher will help them discover that there is no real ending—just as there is no end to the water cycle, it keeps moving through the four stages. Students will be introduced to *canons*, *rounds* and *ostinatos* (see *Musical Terms Vocabulary Handout* in **Supporting Resources**). Students will be asked to sit at a workspace with paper and colors crayons, markers or pencils. The teacher will refer back to their discovery that **Part I** and the water cycle itself is never ending, and students will then be asked to draw a Musical Map of the melody.

Step Two: (30-40 minutes) Students will look at the diagram of the water cycle and identify **Collection** and the movement from **Collection** to the ocean. Students will be taught **Part 2** of Tom Chapin's *The Wheel of the Water* by call and response. Students will be asked to identify the parts of the melodic line that are "choppy" or *staccato* and the parts that are "smooth" or *legato*. Students will be introduced to the terms *crescendo* and *diminuendo* in reference to waves and the sounds of the ocean. Students will draw Melodic Maps of **Part 2**, noting that the melodic contour starts high and flows down, much like the **Collection** process. Students will then be asked to get into small groups and create a movement that reflects the melodic contour of **Part 2**. [Note: Younger groups might be directed in a movement created by the teacher instead of being engaged in group work.] There will be an assortment of rhythm instruments (see suggested instruments listed under **Tools and Materials**) and scarves available for the students to incorporate into their movement pieces. After two to three minutes of group work, the students will perform their movement pieces. Students will review and sing **Part I** and then be asked what are the dynamic and melodic differences/similarities between the two parts they have learned.

Step Three: (30-40 minutes) Students will look at the diagram of the water cycle and identify **Evaporation** and **Condensation**. Students will be taught **Part 3** of Tom Chapin's *The Wheel of the Water* by call and response. Students will be asked if they would describe this melody as *staccato* or *legato*. [Note: In **Part 3**, the melody is smoothly connected, so the answer would be *legato*.] Students will draw Musical Maps of **Part 3**, noting that the melodic contour starts lower and moves upward, much like the **Evaporation** and **Condensation** processes. Students will then be asked to get into small groups and create a movement that reflects the melodic contour of **Part 3**. [Note: Younger groups might be directed in a movement created by the teacher instead of being engaged in group work.] There will be an assortment of rhythm instruments and scarves available for the students to incorporate into their movement pieces. After two to three minutes of group work, the students will perform their movement pieces. Students will review and sing **Part I** and **Part 2** and then be asked what are the dynamic and melodic differences/similarities of the three parts they have learned so far.

Step Four: (30-40 minutes) Students will look at the diagram of the water cycle, and identify **Precipitation**. Students will be taught **Part 4** of Tom Chapin's *The Wheel of the Water* by call and response. Students will be asked to identify parts of the melody line that are "soft" or *piano* and parts that are "loud" or *forte*. [Note: In **Part 4**, the melody starts softly when referring to the clouds but becomes loud at the part that mentions thunder and lightning.] Students will draw Musical Maps of **Part 4**, noting that the melodic contour flows downward at the mention of rain, but is particularly "loud" or *accented* when there is mention of thunder and lightning. Students will then be asked to get into small groups and create a movement that reflects the melodic contour of **Part 4**. [Note: Younger groups might be directed in a movement created by the teacher instead of being engaged in group work.] There will be an assortment of rhythm instruments and scarves available for the students to incorporate into their movement pieces. After two to three minutes of group work, the students will perform their movement pieces. Students will review and sing **Part I**, **Part 2** and **Part 3** and then be asked what are the dynamic and melodic differences/similarities between the four parts they have learned so far.

Step Five: (30-40 minutes) Students will look at the diagram of the water cycle and review the circular motion of the water cycle. Students will be taught **Part 5** of Tom Chapin's *The Wheel of the Water* by call and response, noting that **Part 5** has brought them full circle to **Collection** again. Students will be asked if they would describe parts of this melody line that are *pianoforte*, *staccato/legato* and/or parts that gradually become "louder" or *crescendo*. Teacher will also explain *diminuendo*, to gradually become "softer" even though it is not used in this line. [Note: In **Part 4**, the melody starts softly and gradually becomes louder as the melody flows upward.] Students will draw Musical Maps of **Part 5**, noting that the melodic contour starts low and moves upward twice as the melody is repeated within **Part 5**. Students will then be asked to get into small groups and create a movement that reflects the melodic contour of **Part 5**. [Note: Younger groups might be directed in a movement created by the teacher instead of being engaged in group work.] There will be an assortment of rhythm instruments and scarves available for the students to incorporate into their movement pieces. After two to three minutes of group work, the students will perform their movement pieces. Students will review **Part 1**, **Part 2**, **Part 3** and **Part 4** and then be asked what are the dynamic and melodic difference/similarities between all five parts of the song.

Step Six: (30-40 minutes) Students will be asked to get into two equal groups, with Group #1 forming a circle around Group #2. Group #1 will hold hands and walk in one direction around Group #2 while singing **Part 1**. Group #2 will be given a movement to do while singing **Part 2** in the middle. [Note: The teacher will pick from one of the movements created while the students worked in groups.] After a few times of singing the parts through, the groups will switch. This activity will be repeated with **Part 1** circling in combination with each of the other **Part 3**, **Part 4** and **Part 5**. Rhythm instruments and/or scarves can be incorporated as well. Students are put into five groups representing the five parts in Tom Chapin's *The Wheel of the Water*. Students listen to Tom Chapin's *The Wheel of the Water* and when they hear their appointed part being played, they stand and sing. [Note: There are sections of the song where each part is sung separately and there are sections where the parts are layered until each part is being sung at the same time!]

Tools and Materials

- *This Pretty Planet*, Tom Chapin available at Tom Chapin's website: <http://www.tomchapin.com/>
- Scarves available at Toys to Grow On: <http://www.toystogrowon.com/sku2636>
- Rhythm instruments including tambourines, maracas, claves, rhythm sticks, rain sticks, castanets or rhythm blocks available at West Music: <http://www.westmusic.com/1002405-kids/k5030-kids-percussion>
- Plain white drawing paper, crayons, markers and/or colored pencils for creating Musical Maps

Supporting Resources

- The Water Cycle Handout
- The Wheel of the Water Handout
- Musical Terms Vocabulary Handout
- Examples of Musical Maps Handout
- H2O - The Mystery, Art, and Science of Water: <http://witcombe.sbc.edu/water/music.html>
- A Kid's Guide to the Water Cycle: <http://www.seametrics.com/water-cycle-guide>
- Classics for Kids: George Fredrick Handel: <http://www.classicsforkids.com/shows/showdesc.asp?id=61>
- Classics for Kids: Saint-Saëns's Biography: <http://www.classicsforkids.com/composers/bio.asp?id=46>
- The Top 25 Water Songs: <http://blog.korwater.com/inside-kor/the-top-25-water-songs/>

Project Objectives & Habits of Mind

Students will be able to call upon the four main stages of the water cycle after this six-part lesson because they experienced the cycle in entirety through their bodies. Through this project students are given an opportunity to **express** themselves through music (both vocally and with instruments), movement and drawing. Students are able to **observe** what they hear and sing and recreate or **envision** it through movement and drawing. Finally, students are able to **reflect** on what they are learning individually and in collaboration with others.

Objective One: Students will reinforce their understanding of the water cycle and **express** themselves by experiencing the four main stages through singing, playing rhythm instruments, movement and drawing and then by working in groups to collectively create movements that illustrate each part of the song and stage of the water cycle.

Objective Two: Students will **envision** through creating and interpreting the music they sing through movement in groups and drawing Musical Maps individually.

Objective Three: Students will **observe** through identifying melodic contour and dynamics in music by listening, echoing through singing, playing rhythm instruments that reinforce the dynamics of *The Wheel of the Water*, moving with the melodic contour and drawing Musical Maps that reinforce the melodic contour and dynamics.

Objective Four: Students will **reflect** on what they are learning by compare and contrast the different dynamics in the music and in the water cycle and through this are given the opportunity to be one part of a whole by experiencing their part in collaboration with others.

Making Learning Visible



Pre-K-6th grade students creating Musical Maps.



3rd-12th grade students creating Musical Maps and movement—the wheel of the water goes round and round.



3rd–12th students creating movement—see the vapors rise, see them cloud the skies.



3rd-7th grade students creating movement—thunder and lightning sound!

Tips for Scaling Project and Further Opportunities

As students get older, group work becomes more successful. The steps can be combined and do not need as much time. For instance, in 3rd-5th grades, students can learn to sing **Part I - Part 5**, draw the Musical Maps, and make up movements in two class periods in most cases. In 6th-8th grades, students can learn to sing all the parts with rhythm instruments and sing them at the same time in one class period. Older students might also perform this song as a whole work for the younger grades in an assembly setting and/or for their families in a formal or informal concert setting.