



**ERIE** *est. 1913*  
**PHILHARMONIC**

# **OUR AMAZING EARTH**

**Concept by Music Director Daniel Meyer**

**Curriculum Designed by Steven Weiser and the  
Erie Philharmonic Education Committee**



# Table of Contents

## 1. Pre-Tests

- Grades K-2 all lessons combined
- Lesson 1 (Grades 3+)
- Lesson 2 (Grades 3+)
- Lesson 3 (Grades 3+)

## 2. CD Track Listing and Listening Guide for Teachers

## 3. Map of the Orchestra

## 4. History of the Erie Philharmonic

## 5. Lesson 1

- Lesson Plan
- Orchestra Map Exploration
- Identifying Instruments

## 6. Lesson 2

- The Forest
- The Carbon Cycle

## 7. Sing-Along

## 8. Game Break

- Maze - Grades K-2, 3+
- Word Search - Grades K-2, 3+
- Coloring - all Grades

## 9. Brief History of the Warner Theatre

## 10. Lesson 3

- Musical Characteristics

## 11. What to Expect at the Concert

## 12. Post-Tests

- Grades K-2 all lessons combined
- Lesson 1 (Grades 3+)
- Lesson 2 (Grades 3+)
- Lesson 3 (Grades 3+)

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# Pre-Test (Grades K-2)

Name \_\_\_\_\_

1. Can you name one of the instrument families of the orchestra?

2. Can you name an instrument from the orchestra?

3. Can you name an instrument that has strings?

4. Can you name an instrument that you play by using air?

# Pre-Test Lesson 1 (Grades 3+)

Name \_\_\_\_\_

1. Can you list the 4 instrument families of a symphony orchestra?

- 1.
- 2.
- 3.
- 4.

2. Can you name these instruments?



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_

3. Is this instrument from the Brass or Woodwind family?



\_\_\_\_\_

4. Is this instrument from the Percussion or String family?



\_\_\_\_\_

5. What does a string player use to create sound on their instrument?

\_\_\_\_\_

6. How do instruments from the percussion family create sound?

\_\_\_\_\_

# Pre-Test Lesson 2 (Grades 3+)

Name \_\_\_\_\_

1. How many layers make up a forest?

\_\_\_\_\_

2. What are some things plants in the forest need to survive?

\_\_\_\_\_

3. The carbon \_\_\_\_\_ shows how carbon moves through areas on the earth in different forms

(Fill in the missing word)

4. What is one thing you can do to have a positive impact on the environment?

\_\_\_\_\_

5. Can you name your three favorite dinosaurs?

\_\_\_\_\_

# Pre-Test Lesson 3 (Grades 3+)

Name \_\_\_\_\_

1. What musical term defines the speed of a song?

\_\_\_\_\_

2. Does adagio mean slow or fast?

\_\_\_\_\_

3. What musical term deals with how loud or soft music is?

\_\_\_\_\_

4. Can you list three emotions that music can make you feel?

\_\_\_\_\_

# CD Track Listing

Music in bold will be performed on the in-school concert.

All other music is available for the classroom exercises.

- 1. La Mer, Movement 3 - Debussy**
- 2. Intermezzo from *Midsummer Night's Dream* - Mendelssohn**
- 3. Watershed, Movement 3 - Lynn Purse**
- 4. Cantus Arcticus - Rautavaara**
- 5. Symphony No. 5, Movement 2 - Prokofiev**
- 6. Symphony No. 50, Movement 3 - Hovhanness**
- 7. Theme from *Jurassic Park* - Williams**
8. Musical Characteristic 1 - Beethoven, Symphony No. 9 - Movement 2
9. Musical Characteristic 2 - Beethoven, Symphony No. 5 - Movement 1
10. Musical Characteristic 3 - Beethoven, Leonore Overture No.3
11. Musical Characteristic 4 - Beethoven, Piano Concerto No. 1 - Movement 2
12. Musical Characteristic 5 - Beethoven, Symphony No. 9 - Movement 3

# CD Listening Guide

## **La Mer - Claude Debussy**

However problematic the label “impressionistic” is for the music of Claude Debussy, it does serve to highlight a crucial moment in the relationship between music and the other arts. After a century in which the Romantics celebrated music as the highest form of artistic expression, writers and painters began to free themselves from the ties to concrete reality that had seemed so limiting next to music’s ineffable, abstract qualities. Their resultant breakthroughs inspired composers, most fruitfully Debussy, to think about the materials of their art in new and previously unimaginable ways. Specific visual inspiration for the 1905 orchestral triptych *La mer* came, ironically, from the earlier generation of painters: Joseph Turner (1775-1851), whom Debussy lauded as the “finest creator of mystery in art,” and Katsushika Hokusai (1760-1849), whose “The Great Wave Off Kanagawa” print was the composer’s choice to adorn the title page of the score. Debussy’s own life experience provided an emotional canvas; he had thought at one point to become a sailor and kept a lifelong attachment to “my old friend, the sea; it is always endless and beautiful. It is really the thing in nature which best puts you in your place.”

Among the artists’ innovations was the use of color as an end in itself, and among the most influential legacies of Debussy was the use of musical color as an end in itself. The most obvious way Debussy achieves his sonorities is by augmenting the standard orchestra with some glitter: two harps and a large percussion section. But other musical elements also become agents of color. Harmonic changes serve as color washes; chords dissolve rather than resolve. Short melodic motives rather than fully developed themes sparkle in brief solos, substituting timbre and movement for narrative coherence.

Throughout the first movement, “From Dawn to Noon on the Sea,” motives interplay with quick timbral changes to suggest the sea’s dual nature: ever-changing on the surface but with an underlying eternal and static quality. The opening wavelike figure gradually accelerates; several thematic gestures emerge as the sea awakens, then subsides as a brass chorale suggests the ocean’s depths. “Play of the Waves” functions as a symphonic scherzo, its evanescent interaction of timbre, non-Western scales, and cross-rhythms portraying the unsettled nature of the waves that dance, break apart, and come back together. As its title suggests, “Dialogue of the Wind and the Sea” offers more traditional thematic interchange, enhanced by the return of material from the first movement; this thematic repetition gives the piece a sense of settling down. There is an especially delicious effect when a solo trumpet rises above the fray momentarily, only to be reabsorbed into the orchestra. The ending washes over us with forceful dissonance, leaving the sensation Debussy identified of being “in your place.”

## **Intermezzo from *Midsummer Night’s Dream* - Felix Mendelssohn**

The fusion of drama and music is as old as recorded history. In the ancient Greek drama, in the liturgical plays of the Middle Ages, in the plays of Shakespeare, and on to the era of films, music has often functioned as an indispensable adjunct to theatrical presentation. Setting the mood of a scene, commenting on the action, conveying psychological undercurrents, depicting character – as well as providing prescribed musical selections – all of these purposes and others are served by incidental music.

In the annals of incidental music, few if any matches are quite as perfect as Mendelssohn’s score and Shakespeare’s *A Midsummer Night’s Dream*. Play and music became a true meeting of the spirits of author and composer. As a youngster, Mendelssohn had become familiar with Shakespeare, and particularly of *A*



# CD Listening Guide

Midsummer Night's Dream, in the translations to German of the Englishman's works. The composer's sister Fanny explained it this way. "From our youth on we were entwined in A Midsummer Night's Dream, and Felix particularly made it his own. He identified with all the characters. He re-created them, so to speak, every one of those whom Shakespeare produced in the immensity of his genius." The first tangible result of Mendelssohn's identification with all the characters was the Overture, which came off of the young composer's writing table when he was all of 17 years old. Years after its first performance in 1827, the composer spoke of his intentions, explaining: "It follows the play closely. I think it should be enough to point out that the fairy rulers, Oberon and Titania, appear throughout the play with all their people. At the end, after everything has been satisfactorily settled, and the principal players have joyfully left the stage, the elves follow them, bless the house and disappear with the dawn. So the play ends, and my Overture too."

For Mendelssohn, however, the end of the Dream story did not come until 1943, when the King of Prussia asked the composer to write incidental music for a Berlin production of the play. Imagination stirred anew and enthusiasm bolstered by the production's gifted director Ludwig Tieck, Mendelssohn plunged into the task. Apparently anointed with newly activated amounts of Shakespearian fairy dust, he turned out a score that quite remarkably takes up the enchantment of the Overture where it left off all those years before. It should be remarked that there are those who don't think that estimate is a true one, and who believe the 1843 music does not reach the Overture's standard. Yet, even while standing in awe of the youthful piece, how can one fail to be swept up into the gossamer web of the Scherzo, the limpid calm of the Nocturne, the grandeur of the main section of the Wedding March and the ardor of its middle section, or any of the countless magical moments that shine through the complete score.

Intermezzo (between acts II and III). Another side of the Mendelssohn persona, the familiar Intermezzo is marked *Allegro appassionato* and is full of controlled ardor and elegant expressiveness.

## **Watershed, Movement 3 - Lynn Purse**

*Watershed* is part of the larger long-term work – *A Year in Penn's Woods* – which is a mix of different kinds of musical and multi-media pieces that focus on the habitats and ecological systems of Western Pennsylvania. A concept that Purse developed on her last sabbatical, she has made presentations at national music conferences and locally at the Phipps, including a short video shot in North Park entitled *Autumn Equinox*. That video would later serve as inspiration for the "Sunrise on Still Water" movement of *Watershed*.

*Watershed* was supported by a Duquesne University Presidential Scholarship Award in 2017. After the premiere performance, the piece will be recorded with DSO, Adam Liu, and conductor Daniel Meyer in The Dr. Thomas D. Pappert Center for Performance and Innovation by faculty audio engineer Jay Dudt and released on the Three Oranges label.

## **Cantus Arcticus - Einojuhani Rautavaara**

In many ways, Rautavaara's *Cantus Arcticus* is a modern incarnation of the "Goldfinch" concerto, except the soloists are actual birds, recorded near the Arctic Circle and in the bogs outside the town of Liminka in northern Finland. To build a musical work around a series of tape recordings also probes the differences between what is real and what is artificial, not unlike the story of "The Nightingale." Like all electro-acoustic works, this piece

# CD Listening Guide

combines the “realness” of live musical forces, in this case a chamber orchestra, with the “artifice” of electronically produced sound, in this case the tape recordings. The paradox then, given that the recorded sounds are of actual birds, the calls of which the instruments can only imitate, is that the recording might actually be the more “real” voice. Or perhaps we are meant to hear a conversation between the here and now of the orchestra and the dreamlike somewhere else conjured through the recordings.

At the beginning of the first movement, “The Bog,” the two flutes are asked to “think of autumn and of Tchaikovsky” during their duet, before being joined by the rest of the woodwinds and then the birds, all the way from Finland. The repeated statements from the oboes and trumpets combine major and minor thirds, in a dissonant callback to the cuckoo song of Beethoven’s Sixth Symphony, “The Pastoral”—a gesture that creates a sense of temporal as well as spatial distance. The second movement, “Melancholy,” features a slowed-down recording of two shore larks calling back and forth to one another. Where in the first movement the birds of the bog receded into the background of the conversation among the woodwinds and brass, here the chorale-like texture in the strings creates a meditative space in which we can focus on the dialogue between the birds on the recording. In contrast, the third movement, “Swans migrating,” mimics the movement of birds rather than their voices. Over a recording of whooper swans, four groups of instruments are “only summarily synchronized mutually”—that is, they move closely together within their groups, but not identically. The first group is the violins and violas; the second the woodwinds; the third the horns, celli, and basses; and the fourth the celesta and harp. Each of the four groups occupies the same space, overlapping without colliding—coordinated, but not perfectly in synch. Anyone who has seen a flock moving together amorphously, or formations of geese flying at slightly different paces, can imagine what the sound of these instrumental choirs might look like. Over the course of the movement, in one long dynamic crescendo, these four groups and the recording meld together before fading into one distant sonic impression.

## **Symphony No.5, Movement 2 - Sergei Prokofiev**

So popular was Prokofiev’s Fifth Symphony that, within months of its American premiere, a portrait of the composer was featured on the cover of Time magazine, in November 1945. In a period when Russia and its people were still regarded as our allies in the victory over fascism, the Symphony was a hit at home and abroad, the musical celebration of the war’s conclusion. But was it that?

When we read about this work, we see again and again the same adjectives circling – “heroic” or “joyous.” And always in the context of a nation’s victory, a people’s victory – but was it that? The decades do not bring this enigmatic man or his music into precise focus; he seems to evade scrutiny.

We know that this four-movement Symphony was composed in the summer of 1944, shortly after the landings of Allied troops on the beaches of Normandy and throughout the westward pushes of the Russian forces toward Berlin. By the time of its premiere in Moscow in January of 1945 under the composer’s direction, distant celebratory artillery fire would cause Prokofiev to pause, arms raised, as he prepared to begin the performance – the Russian army had crossed the Vistula.

Certainly the Symphony opens with an upward soaring, unmistakably optimistic theme, and the grinding climax at the end of the movement is a crisis vanquished. The second movement is a nervous scherzo, a stark contrast

# CD Listening Guide

to the doleful third movement. But is the victory described in the final movement a personal or a public conquest? Is this, as Prokofiev wrote, "a symphony of the greatness of the human spirit, a song of praise of free and happy mankind," or is it, perhaps belying his official public statement, the struggle of the individual artistic spirit in the stifling confines of Stalin's cultural stranglehold? The greatness of this Symphony is inherent in this ambiguity. It can support a number of interpretations and no single one of them can confine it or bind it to the ground.

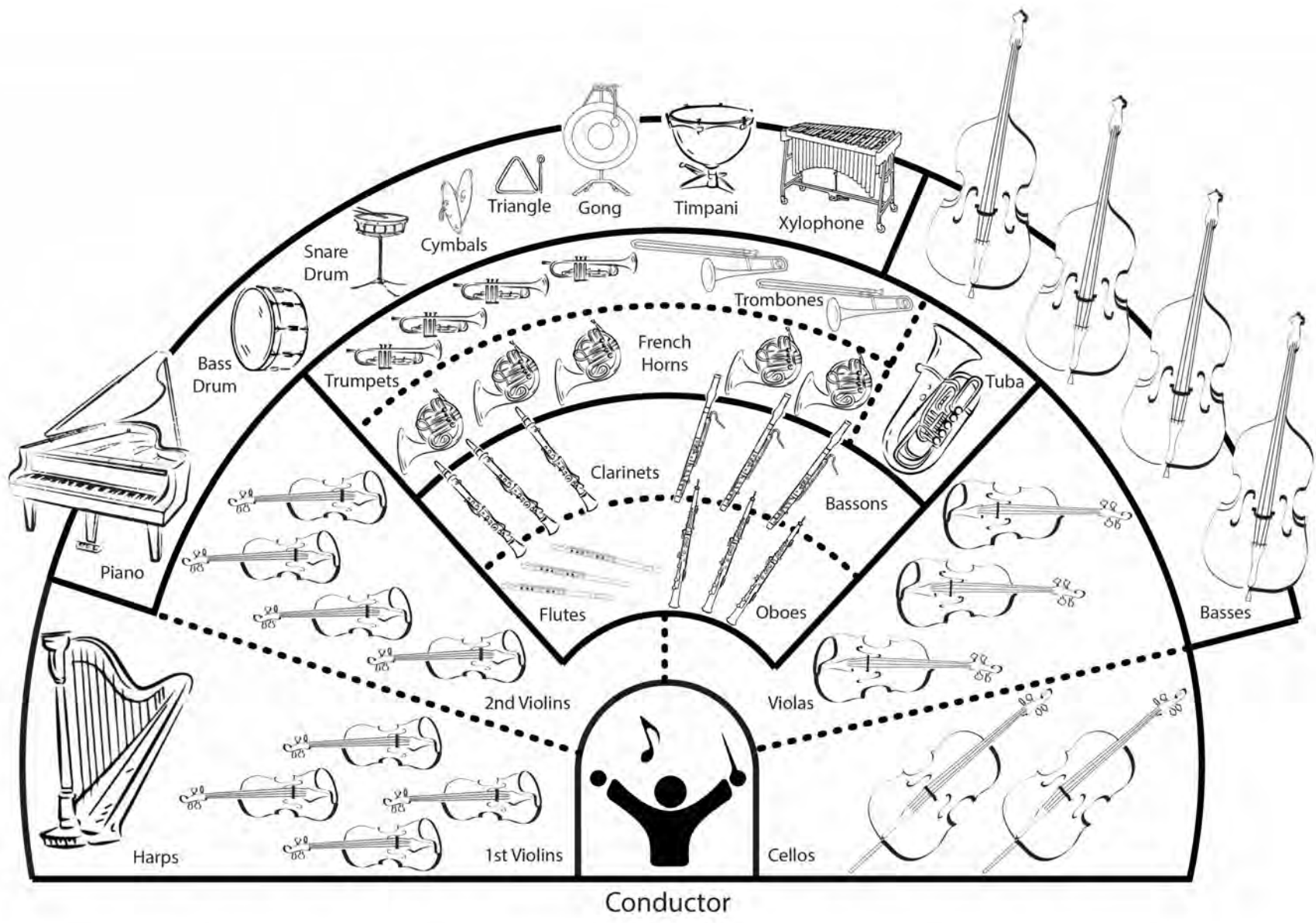
## **Symphony No. 50, Movement 3 - Alan Hovhanness**

**From the composer:** "When Mount St. Helens erupted on the morning of May 18, 1980, the sonic boom struck our south windows. Ashes did not come here at that time but covered land to the east all across the State of Washington into Montana. Ashes continued to travel all around the world, landing lightly on our house a week later, after their journey all around our planet. In my Mount St. Helens Symphony I have tried to suggest a musical tribute to the sublime grandeur and beauty of Mount St. Helens and the surrounding majestic Cascade Mountains."

## **Theme from *Jurassic Park* - John Williams**

Williams began writing the *Jurassic Park* score at the end of February 1993, and it was conducted a month later; because Williams sustained a back injury during the scoring sessions, several cues were conducted by Artie Kane (Kane is uncredited in the film, but receives special thanks in the 1993 soundtrack album's credits and is listed as a conductor in the La-La Land Records set). John Neufeld and Alexander Courage orchestrated the score. The composition process was done in Skywalker Ranch concurrently with the sound editing process, leading Williams to get inspiration from Gary Rydstrom's work with dinosaur noises. Williams described it as, "a rugged, noisy effort—a massive job of symphonic cartooning". He also said that, while trying to, "match the rhythmic gyrations of the dinosaurs", he ended up creating, "these kind of funny ballets". As with another Spielberg film he scored, *Close Encounters of the Third Kind*, Williams felt he needed to write, "pieces that would convey a sense of 'awe' and fascination", given that the movie dealt with the, "overwhelming happiness and excitement", that would emerge from seeing live dinosaurs. In turn, more suspenseful scenes, such as the *Tyrannosaurus rex* attack, earned frightening themes. For the first time, Spielberg was unable to attend the recording sessions for one of his own movies, as he was in Poland filming *Schindler's List*. Instead, Williams gave Spielberg demo tapes with piano versions of the main themes prior to his travel, and the director would listen to them daily on the way to the sets.

# Map of the Orchestra





# History of the Erie Philharmonic

The history of the Erie Philharmonic began 106 years ago on November 30, 1913, when the Erie Symphonic Orchestra presented a concert of "Sacred Music." It was then a 50 piece ensemble under the direction of Franz Kohler. The concert was entirely symphonic and enthusiastically received by the Erie audience. Kohler, who had been Concertmaster and first violinist of the Pittsburgh Symphony Orchestra from 1897-1911, conducted the orchestra until 1916 when his health failed.

In 1920, following a lapse of four years and the end of World War I, the Orchestra was reorganized under the direction of Henry Vincent. As Music Director for one season, Vincent revised the orchestra under the sanction of the American Federation of Musicians so that professional and amateur musicians played together.

Under the baton of John R. Metcalf, from 1931-1947, the Orchestra reached a new level of support from the community. The Erie Philharmonic Society was created to sponsor the orchestra, and in 1947, members were paid union scale wages. In 1942, the Orchestra became one of the charter members of the American Symphony Orchestra League (now known as the League of American Orchestras).

Fritz Mahler (a nephew of the composer Gustav Mahler) was appointed Music Director in 1947 and conducted the Orchestra's first pops concert in 1950. Under the leadership of Mahler, two long-standing traditions began. In 1948 the Women's Auxiliary was formed (known later as the Friends of the Philharmonic) and the first Viennese Ball was held. In 1950 the Erie Philharmonic sponsored its first important commission for a new musical work by Erie native Peter Mennin. He composed "Concerto for Orchestra," which has established itself in the broader orchestral repertoire.

In 1953, Music Director James Sample and Orchestra President William Schuster established the Erie Junior Philharmonic, which today still serves as an important part of the Orchestra's educational activities. After Sample, the Orchestra continued under the artistic direction of John Gosling (1967-74), Harold Bauer (1974-76), Walter Hendl (1976-1990), Eiji Oue (1990-96), Peter Bay (1996-99), and Hugh Keelan (1999-2005). Daniel Meyer, the Philharmonic's 12<sup>th</sup> Music Director, was appointed in July 2007.

A milestone was reached in 1975 when the Orchestra moved to its present home, the historic Warner Theatre in the heart of downtown Erie. In November of 2013, the Orchestra celebrated its 100<sup>th</sup> Anniversary!

# Lesson 1

**Objective** - Learn about the various families of a symphony orchestra through visual and aural examples.

## **Pennsylvania State Standards - Music**

- 9.1.3.A Know and use the elements and principles of each art form to create works in the arts and humanities
- 9.1.3.C Recognize and use fundamental vocabulary within each of the arts forms
- 9.1.3.I Identify arts events that take place in schools and in communities

## **National Standards - Music**

- #5 - Reading and notating music
- #6 - Listening to, analyzing, and describing music

### **1. Outcomes - "I can..."**

1. Identify the four families of the orchestra
2. Identify how each instrument creates sound
3. Identify instruments by their picture
4. Identify instruments by their sound
5. Understand the difference between high/low, fast/slow, and loud/soft
6. Identify the proper seating of orchestra families

### **2. Activity 1 - Orchestra Map**

1. Explore the four different families of instruments
2. Listen to music from the supplied listening CD and have students point to the families of the orchestra when they hear them

### **3. Activity 2 - Identify Instruments (K-2, 3+)**

1. Using orchestra map, review instrument families
2. Draw lines from instruments to their proper family or name - use map for reference

### **4. Activity 3 - The Families**

1. Have students circle the correct instrument family on each worksheet

# Identify Instruments - Grades K-2

Draw lines connecting the name to the correct instrument!

Tuba

Flute

Violin

Drum

Triangle

Tambourine

Trumpet

Piano



# Identify Instruments - Grades 3+

Draw lines from the instruments to their proper families!

Woodwinds

Percussion



Strings

Brass



# The Families

Snare Drum, Cymbals, Bass Drum and Timpani



Woodwind

Brass

Percussion

Strings

Circle the correct family!

# The Families

Xylophone, Marimba, Glockenspiel, Chimes, Tam-tam,  
Maracas, Triangle and Woodblock



Woodwind

Brass

Percussion

Strings



Circle the correct family!

# The Families

French Horn, Trumpet, Trombone and Tuba



Woodwind

Brass

Percussion

Strings

Circle the correct family!

# The Families

Flute, Oboe, Clarinet and Bassoon



Woodwind

Brass

Percussion

Strings

Circle the correct family!

# The Families

Violin, Viola, Cello and Bass



Woodwind

Brass

Percussion

Strings

Circle the correct family!

# Lesson 2

## Forests

### 1. Objectives

1. To learn about the layers of the forest and the types of plants and animals that live in each layer.
2. To learn the benefits of forests to the environment and humans.
3. To learn about the parts of trees and their functions.
4. To understand the way that forests help to reduce the impacts of climate change.

### 2. Outcomes - I will be able to

1. Name the three main layers of the forest.
2. Identify one type of plant and animal that lives in each layer.
3. List three ways trees help the environment and humans.
4. Name the three main parts of trees and explain their functions.

### Older students

1. Describe the process of photosynthesis.
2. Explain that carbon dioxide is a greenhouse gas and how it contributes to climate change.
3. Explain how forests are carbon reservoirs and reduce the negative impacts of climate change.

### 3. Standards Addressed

#### PA Academic Standards for Science and Technology (2002)

##### 3.1 Unifying Themes

3.1.4A Know that natural and human-made objects are made up of parts.

- Identify and describe what parts make up a system.

3.1.4C. Illustrate patterns that regularly occur and reoccur in nature.

- Identify observable patterns (e.g., growth patterns in plants, crystal shapes in minerals, climate, structural patterns in bird feathers).

##### 3.3 Biological Sciences

3.3.4A. Know the similarities and differences of living things.

- Identify life processes of living things (e.g., growth, digestion, react to environment).
- Describe basic needs of plants and animals.

3.3.4B. Know that living things are made up of parts that have specific functions.

- Determine how different parts of a living thing work together to make the organism function.

#### PA Academic Standards for Environment and Ecology (2002)

##### 4.2 Renewable and Nonrenewable Resources

4.2.4A Identify the needs of people

- Identify plants, animals, water, air, minerals and fossil fuels as natural resources.
- Identify how the environment provides for the needs of people.

4.2.4B Identify products made from natural resources

- Identify products made from trees.

##### 4.3 Environmental Health

4.3.4C Understand the elements of natural systems are interdependent

- Identify some of the organisms that live together in an ecosystem.

##### 4.6 Ecosystems and Their Interactions

4.6.4A Understand that living things are dependent on nonliving things in the environment for survival.

- Describe how animals interact with plants to meet their needs for shelter.

4.8.4A Identify the biological requirements of humans

- Identify several ways that people use natural resources

4.8.4D Know the importance of natural resources in daily life.

- Identify items used in daily life that come from natural resources.

# Lesson 2 Continued

## Machinery, Pollution and the Carbon Cycle

### 1. Objectives - To learn

1. about the process of photosynthesis.
2. about the process of respiration.
3. about how photosynthesis and respiration are interrelated in the carbon cycle.
4. the difference between renewable and nonrenewable energy sources.
5. about how humans can have a negative impact on the carbon cycle.
6. how changes in the carbon cycle can increase the impacts of climate change.
7. how humans can reduce climate change.

### 2. Outcomes - I will be able to

1. Name the main steps in the process of photosynthesis.
2. Name the main steps in the process of respiration.
3. Trace the steps in the carbon cycle.
4. Explain the reason fossil fuels are nonrenewable resources and wind and solar power are renewable resources.
5. Identify two ways humans have a negative impact on the carbon cycle.
6. Explain how an increase in carbon dioxide in the atmosphere causes climate change.
7. Explain how air pollution can make human diseases worse.
8. Discuss how humans can take action to reduce the impacts of climate change.

### 3. Standards Addressed

#### PA Academic Standards for Science and Technology (2002)

##### 3.1 Unifying Themes

3.1.4A Know that natural and human-made objects are made up of parts.

- Identify and describe what parts make up a system.
- Identify system parts that are natural and human-made (e.g., ball point pen, simple electrical circuits, plant anatomy).

#### PA Academic Standards for Environment and Ecology (2002)

##### 4.2 Renewable and Nonrenewable Resources

4.2.4A Identify the needs of people

- Identify plants, animals, water, air, minerals and fossil fuels as natural resources.
- Explain air, water and nutrient cycles.
- Identify how the environment provides for the needs of people

4.2.4C Know that some natural resources have limited life spans.

- Identify renewable and nonrenewable resources used in the local community.
- Identify various means of conserving natural resources.

##### 4.3 Environmental Health

4.3.4A Know that plants, animals and humans are dependent on air and water.

- Know that all living things need air and water to survive.
- Identify different areas where health can be affected by air, water or land pollution.
- Identify actions that can prevent or reduce waste pollution.

4.3.4B Identify how human actions affect environmental health.

- Identify pollutants.
- Identify sources of pollution.
- Describe how people can reduce pollution.

##### 4.6 Ecosystems and Their Interactions

4.6.4B Understand the concept of cycles

- Explain the carbon dioxide/oxygen cycle (photosynthesis).

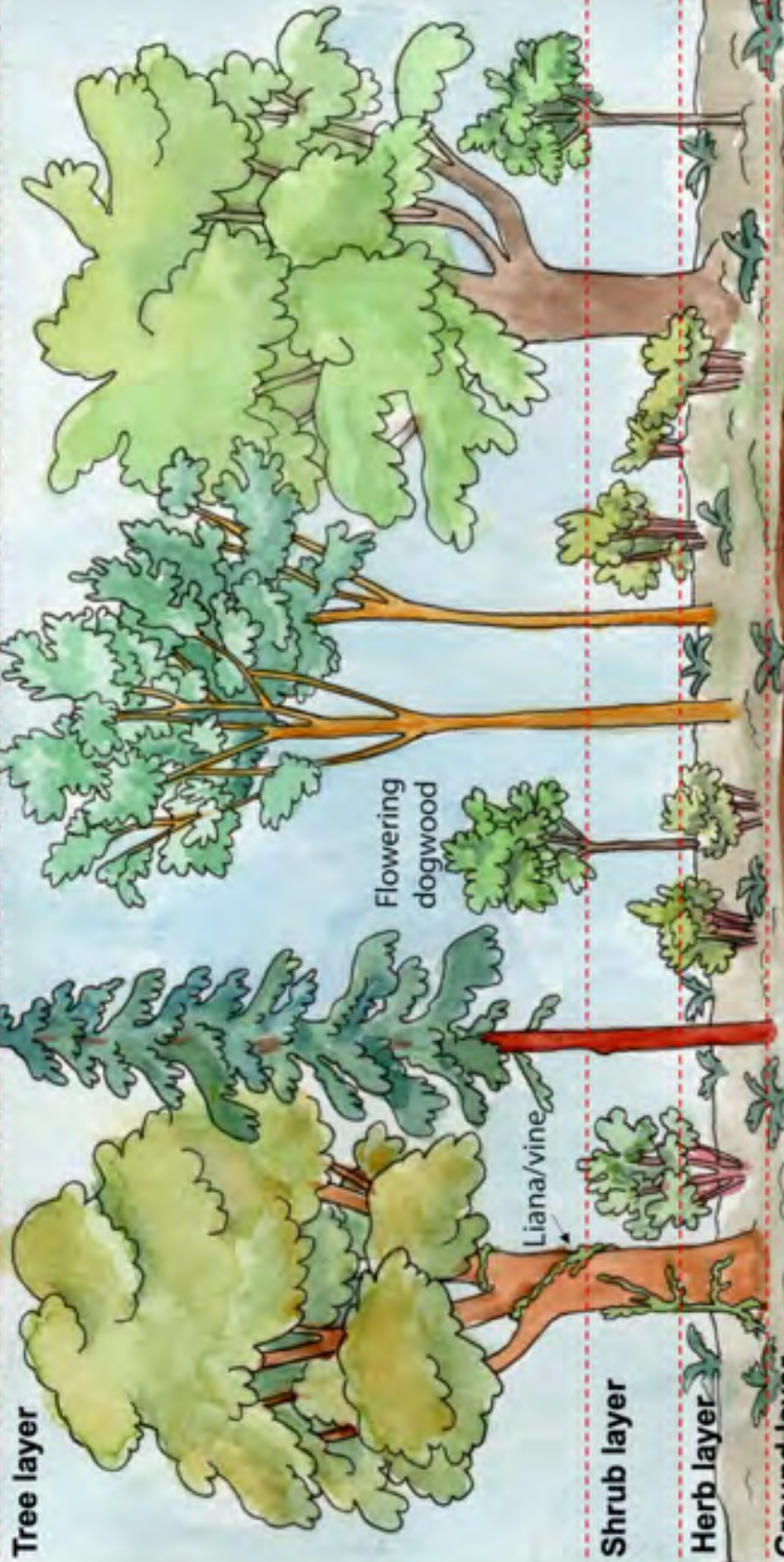
American beech

Trembling aspen

Eastern hemlock

Sugar maple

Tree layer



Flowering dogwood

Liana/vine

Shrub layer

Herb layer

Ground layer



# The Forest

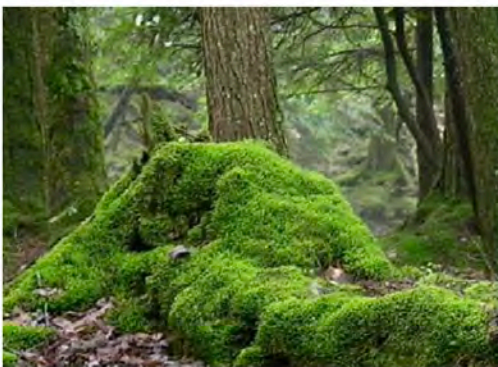
## Teacher's Guide

### Background Information

We live in a temperate climate which means we don't consistently experience extreme heat or cold because of our location between the north pole and the equator. Thus, we have a change of seasons throughout the year with a moderate amount of precipitation. This supports the temperate deciduous forested areas around us.

The temperate deciduous forest has the following layers:

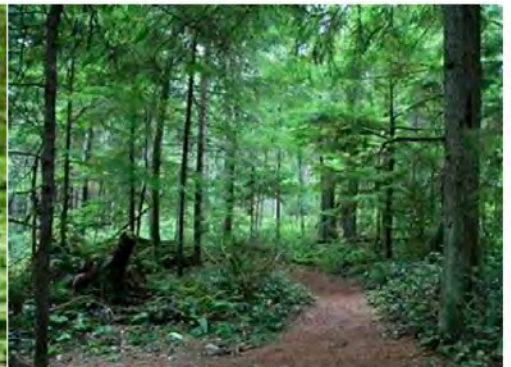
1. Ground layer consists of very small plants that hold the soil in place such as mosses.
2. Herb and shrub layers consist of small plants such as ferns.
3. Tree layer has 2 levels: the understory (young trees) and the canopy (tall, mature trees).



**Ground Layer**



**Shrub Layer**



**Understory and Canopy Layers**

Forests provide many services for us.

1. Food – edible plants, fruits, nuts
2. Homes (habitats) for animals – owls, deer, squirrels, etc.
3. Tree roots hold the soil in place and prevent erosion (movement of soil).
4. Trees are a carbon reservoir. In the process of photosynthesis, they take in carbon dioxide and release oxygen. This helps to reduce climate change and filter the air. The more CO<sub>2</sub> in our atmosphere, the more the temperature increases which can cause an imbalance in our climate.
5. Medicines – Plants such as rosy periwinkle produces medicines to treat leukemia and cinchona trees provide quinine, which is an important medicine for treating malaria.
6. We get timber from trees to produce wood products.
7. Recreation and aesthetics – We can visit natural forests to walk on trails, ride bikes, observe animals, go on nature tours, etc.

# The Forest

## Teacher's Guide

### Activities

1. Remove the layer labels from the forest diagram (provided). Make copies of the forest diagram for each student or groups of students. Place the names on the board and have the students fill them in while describing them.
2. Look around your classroom and identify anything that could have been made from trees. Can you think of anything else you have at home made of wood?
3. Draw a tree and label its parts. Can you explain what each part does for the plant?

*Leaves – photosynthesis*

*Trunk and branches – move water and nutrients from the roots to the leaves and move food from the leaves to the branches and roots*

*Roots - take up water and nutrients from the soil*

4. If you have a forest on your school property or nearby, take a walk to identify the layers and notice the types of plants and animals that live there.

### Discussion questions

1. Ask the students if they have ever visited a forest area. Can they describe what they saw? Plants? Animals?
2. How many forest benefits can they name?
3. What do plants in the forest need to live?

*Water, sunlight, nutrients from soil, space*

4. What is the importance of soil?

*Soil provides a substance to anchor the plant and roots to take up water and nutrients.*

5. Why do you think specific plants live in certain layers?

*Plants can survive with various levels of the items mentioned above. For example, the plants that live on the forest floor require little sunlight. Those in the canopy require a lot.*

### Older students

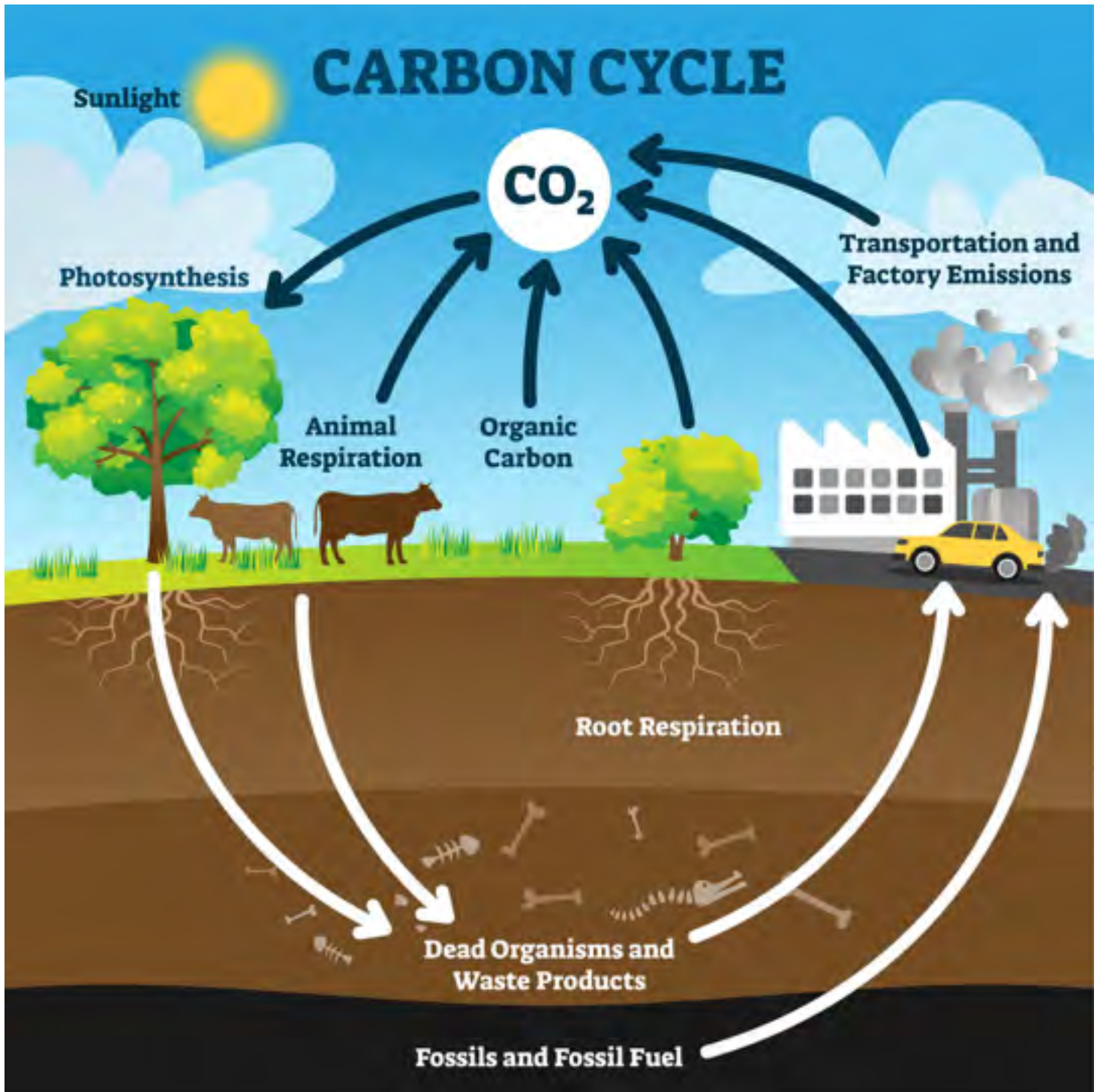
1. Can they describe the process of photosynthesis?

*Plants take in carbon dioxide and with the energy from the sun, they make food. They release oxygen as a waste product.*

2. How does photosynthesis help reduce climate change?

*When carbon dioxide levels increase, usually from burning fossil fuels like coal, oil and natural gas, it heats up the atmosphere. That increase in temperature causes the melting of glaciers, sea levels to rise and an increase in stormy weather. Plants take in carbon dioxide during photosynthesis which helps to reduce the effects of climate change.*

# CARBON CYCLE



# The Carbon Cycle

## Teacher's Guide

### Background Information

The carbon cycle shows how carbon moves through areas on the earth in different forms. It consists of two main processes.

1. Photosynthesis occurs when plants take in  $\text{CO}_2$  (carbon dioxide) from the atmosphere to make food in the presence of sunlight and release oxygen as a waste product.
2. Respiration occurs when animals take in oxygen and while breaking down food in their bodies, they release  $\text{CO}_2$  as a waste product. That is why we say humans breathe in oxygen and breathe out carbon dioxide. Plants and animals die and their bodies are decayed in the soil.

Humans have a negative impact on the carbon cycle in the following ways.

1. We remove fossil fuels (coal, oil and natural gas) that were created millions of years ago by mining and drilling underground.
2. When we burn coal in electric power plants, burn natural gas to power manufacturing processes and heat our homes and use gasoline to drive cars, it adds  $\text{CO}_2$  to the atmosphere.
3. Carbon dioxide is a "greenhouse gas". That means it acts like a greenhouse and increases the temperature on the surface of the earth.
4. The increased temperature causes ice to melt raising sea levels, increased frequency and severity of storms, droughts, floods, fires, etc. We are experiencing these events currently.

The activities mentioned above can put other pollutants into the air such as mercury, ozone and small particles. These can exacerbate human respiratory problems. Some people suffer from asthma, emphysema and lung cancer.

### Activities

1. Remove the arrows from the carbon cycle diagram (provided). Make copies of the diagram for each student or groups of students. Have the students fill in the arrows in while describing the processes.

### Discussion questions

1. Have you ever seen smoke coming from a smokestack, chimney or tailpipe on a car? You can actually see pollutants going into the air.
2. Do you know anyone who has trouble with their breathing? How do you think the quality of the air around them affects them?
3. How can we reduce air pollution? What can you do?

*Reducing the amount of electricity we use can decrease the amount of coal that is burned to produce it.*

4. What about green energy: wind turbines, solar panels? How does that help?

# The Carbon Cycle

## Teacher's Guide

5. What about electric cars? Don't they use electricity? How are they better for the environment than gasoline engines

*Electric cars do use a small amount of energy that has a much lower negative impact than burning gasoline. If the electricity used to power electric cars is produced from green energy (solar panels and wind turbines) instead of burning coal, that would be even better.*

6. What else can you do to have a positive impact on the environment?

*Reduce the amount of resources you use (plastics) and the waste you produce. Plant a garden. Walk or ride your bike to go somewhere.*

# Sing-Along!

Get ready to sing along with the Erie Philharmonic as they perform Woody Guthrie's *This Land Is Your Land*

## Verse 1

This land is your land, this land is my land  
From California to the New York island,  
From the redwood forest to the Gulf Stream waters;  
This land was made for you and me.

## Verse 2

As I was walking that ribbon of highway  
I saw above me that endless skyway;  
I saw below me that golden valley;  
This land was made for you and me.

## Verse 4

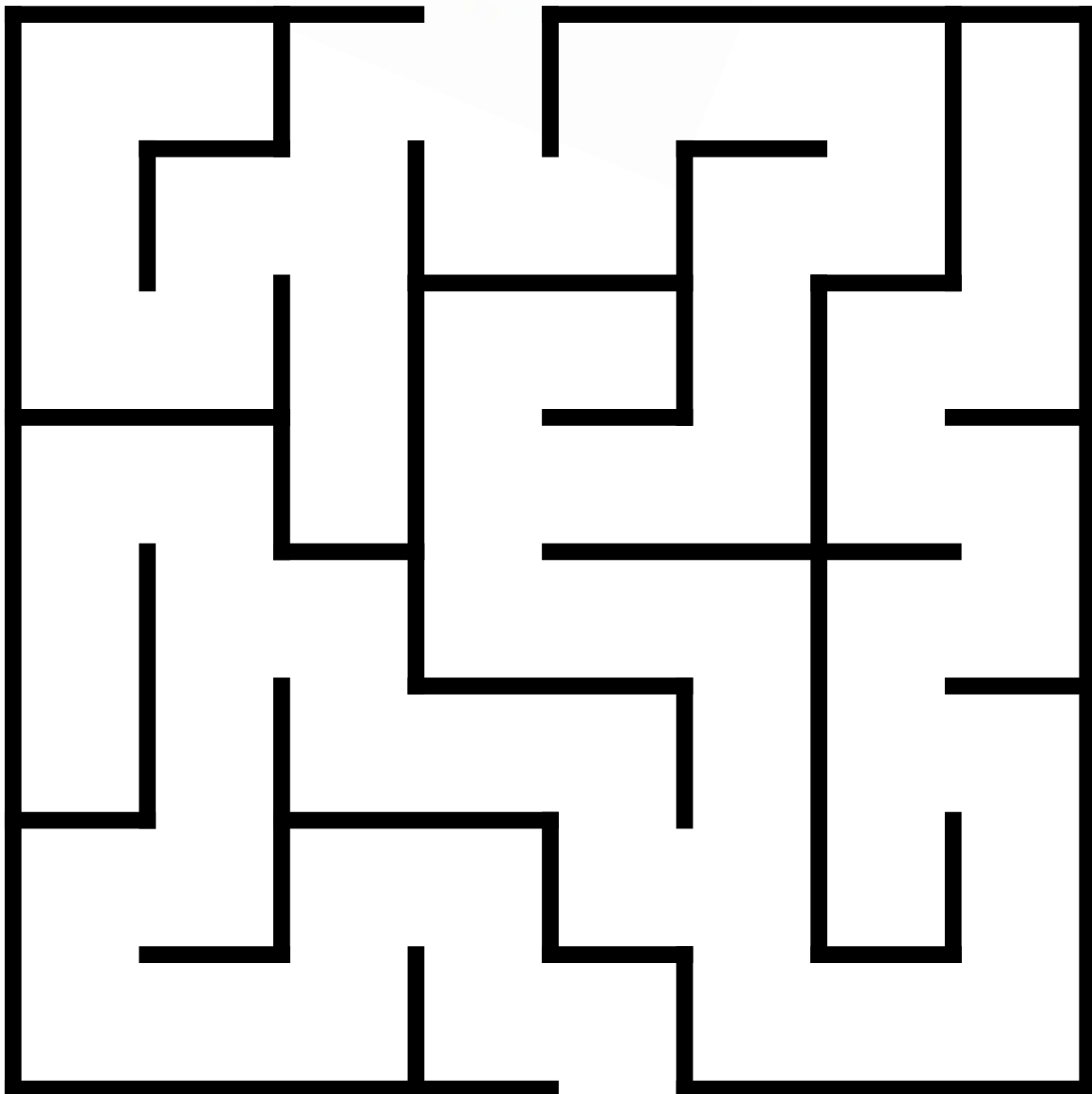
When the sun came shining, and I was strolling,  
And the wheat fields waving and the dust clouds rolling,  
As the fog was lifting a voice was chanting:  
This land was made for you and me.

*This Land Is Your Land* is one of the United States' most famous folk songs. Its lyrics were written by American folk singer Woody Guthrie in 1940 in critical response to Irving Berlin's "God Bless America", with melody based on a Carter Family tune called "When the World's on Fire". When Guthrie was tired of hearing Kate Smith sing "God Bless America" on the radio in the late 1930s, he sarcastically called his song "God Blessed America for Me" before renaming it "This Land Is Your Land".

In 2002, "This Land Is Your Land" was one of 50 recordings chosen that year by the Library of Congress to be added to the National Recording Registry. In 2021, it was listed at No. 229 on Rolling Stone's "Top 500 Best Songs of All Time".

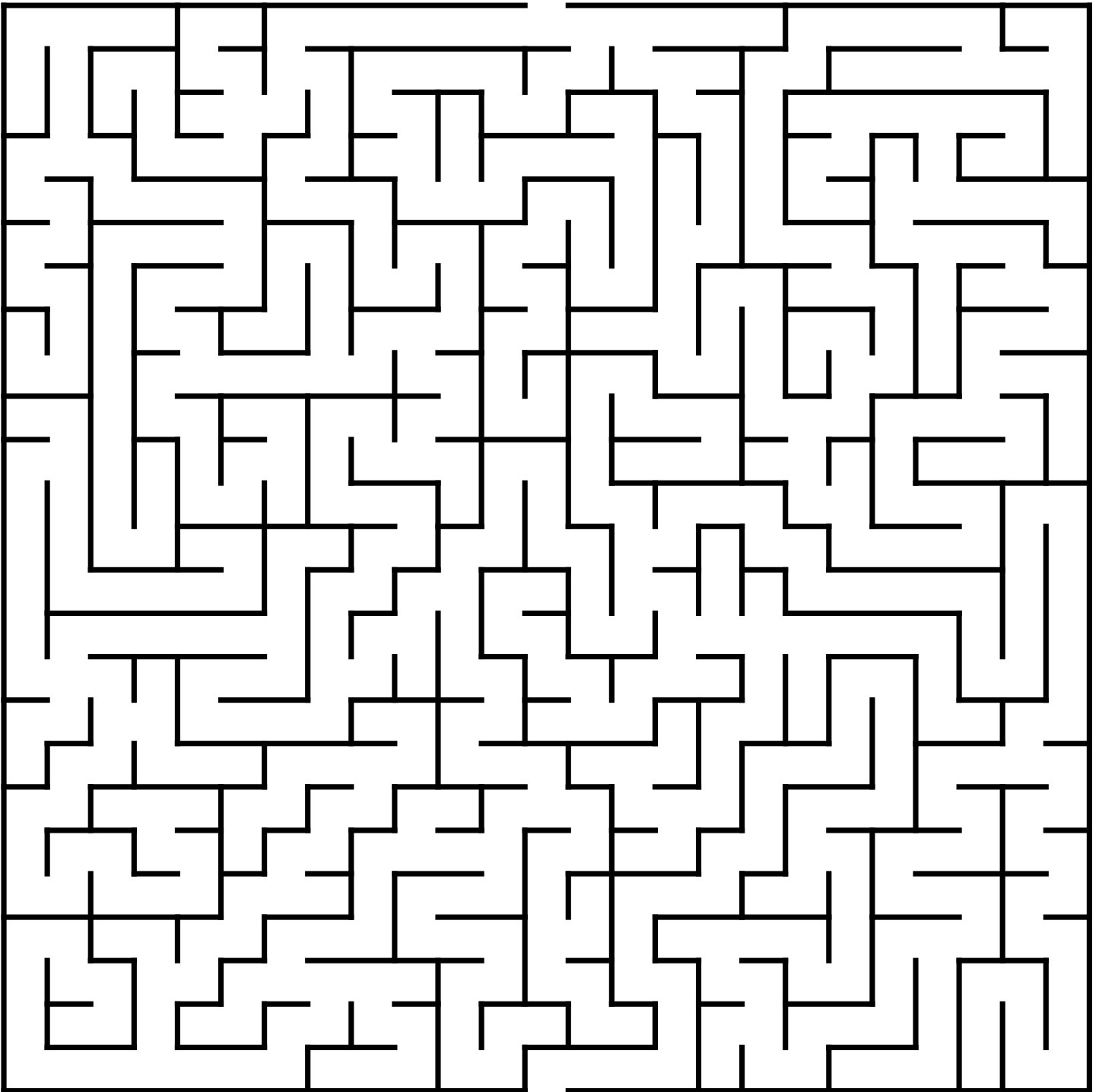
# Maze - Grades K-2

Help the Trumpet find her Drum friend!



# Maze - Grades 3+

Help the Bass Drum find his Cymbal friend!





# Word Search - Grades K-2

## Word Bank

Flute

Tuba

Piano

Music

K	L	T	P	M	Z
C	F	L	U	T	E
C	Q	S	B	B	Q
L	I	X	P	J	A
C	O	N	A	I	P
O	Y	M	Y	N	M

# Word Search - Grades 3+

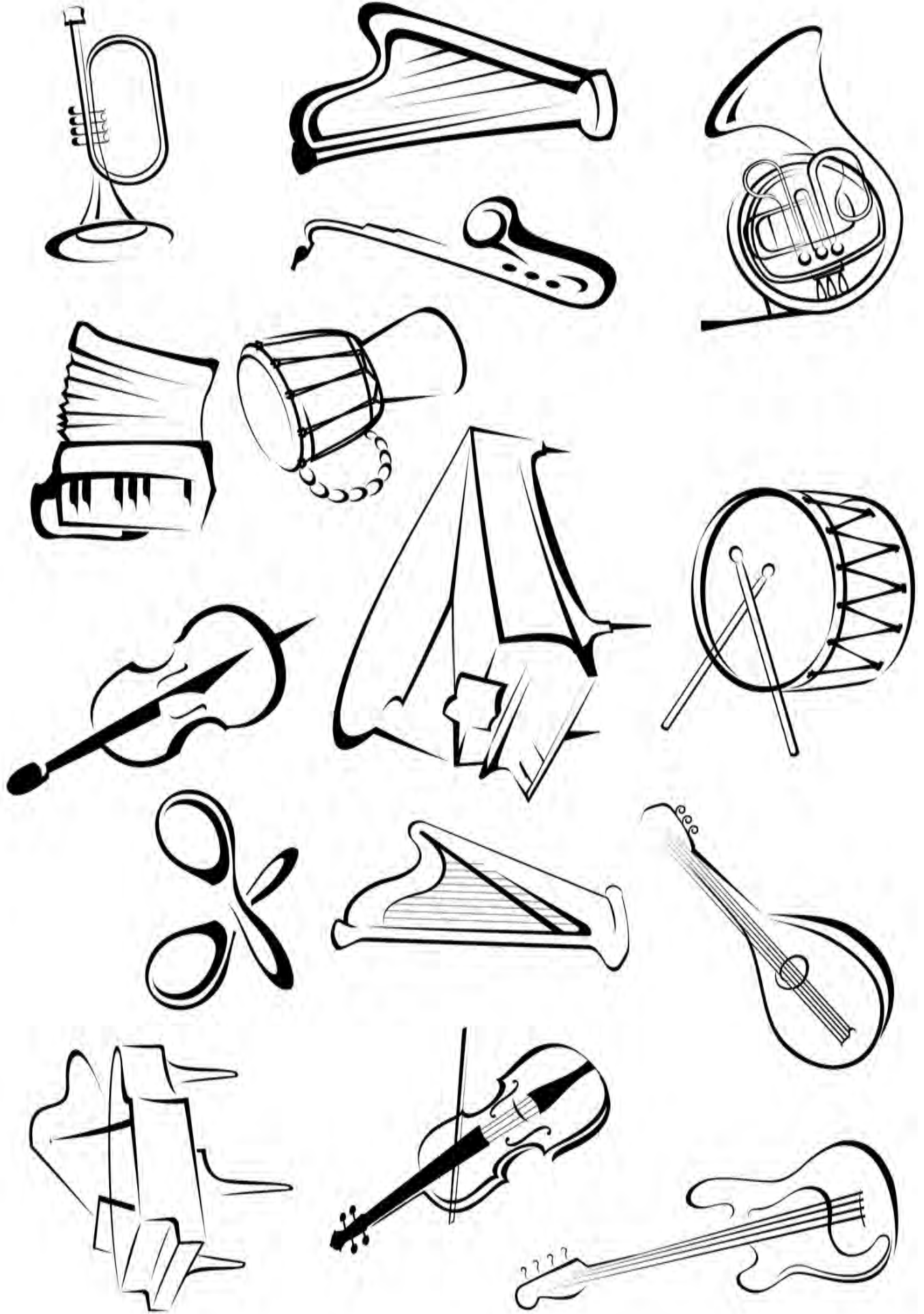
## Word Bank

Bassoon  
Beethoven  
Cello  
Cymbal  
Music

Oboe  
Piano  
Timpani  
Trumpet  
Violin

T B L J Y I D N W K L D T  
I L E N O O S S A B D O F  
M Q A E H Z P L F I H L E  
P U F B T F L G C V A R U  
A D N I M H M P L K H B T  
N M I G D Y O W M G L R C  
I N L F U R C V F G U O Y  
Q F O A W C C M E M O H L  
Z G I T I U Z E P N B F B  
K M V S A H B E L S O Z P  
C C U K Z F T I H L E O W  
K M P I A N O F T Q O H J  
Y E J D G C R M O H U C Z

# Coloring



# History of the Warner Theatre



Since its grand opening, the Warner Theatre has established itself as a major cultural center for the region. Millions have passed by the free-standing ticket booth of solid bronze, walked through the main doors and stepped into the luxuriously gilded Grand Lobby.

There they behold untold beauty of rich tapestry and French gold backed mirrors. A regal staircase with exquisite bronze banisters leads them through an archway of marble, gold gilding, and draped tapestry to the mezzanine. Czechoslovakian glass and crystal chandeliers create the soft lighting that enhances the

grandeur of an edifice unmatched in stature, opulence and beauty. The beauty of this theatre is absolutely breathtaking.

The Warner Brothers commissioned the building of the Warner Theatre in 1929, appointing the world renowned Rambusch Studios in New York City to decorate the interior. Rambusch created a lavish Art Deco interior that would invite generations of theater-goers to a palace of magnificence and fantasy. Considering the quality of the design and cost of the building materials used, the theater would be virtually impossible to replace today.

The Warner Theatre opened its doors on April 10, 1931. 8,000 colored lights illuminated the ten-ton marquee that announced the feature film of the opening evening, "The Millionaire" starring George Arliss and James Cagney. In its early history, the theater hosted various traveling shows, became an important link in the vaudeville circuits of the 1930s, and presented the "pick" of the major film releases. Bob Hope made his appearance at the theater in November 1930 telling stories while sitting on a barrel at the front of the stage.

The "Mighty Wurlitzer" organ that once rose out of the floor into the corner of the orchestra pit provided music for Vaudeville shows and accompanied the early talking motion pictures. The organ was donated to the Western Reserve Chapter of American Theatre Organ Enthusiasts in 1969 by Warner Brothers.

In 1971, Cinemette Corporation of America bought the Warner Theatre and operated it until 1976, when then Mayor Louis Tullio heard that the chain might want to sell the Warner. The mayor saw the importance of saving the Warner from planned demolition. With assistance of the Commonwealth of Pennsylvania, he took it upon himself to negotiate a successful purchase of the building.

In 1977, the Erie Civic Center Authority was formed and given the physical and fiscal management of the Warner Theatre. With this change-over, the policy of the theatre changed as well to one that included the production of mostly live performances. In 1974, the Erie Philharmonic had its first concert at the theater and its home was secured.

In January 2022, the Warner Theatre reopened after a back-stage renovations over 20 years in the making.

# Lesson 3

**Objective** - Learn about various musical terms and definitions through the music of Beethoven (Symphony No. 9, Symphony No. 5, Leonore Overture No. 3 and Piano Concerto No. 1)

## **Pennsylvania State Standards - Music**

- 9.1.3.A Know and use the elements and principles of each art form to create works in the arts and humanities.
- 9.1.3.C Recognize and use fundamental vocabulary within each of the arts forms
- 9.3.3.A Recognize critical processes used in the examination of works in the arts and humanities.
- 9.3.3.B Know that works in the arts can be described by using the arts elements, principles and concepts

## **National Standards - Music**

- #5 - Reading and notating music
- #6 - Listening to, analyzing, and describing music
- #7 - Evaluating music and music performances

## **1. Outcomes - "I can..."**

1. Identify steady versus changing tempi
2. Identify loud/forte versus soft/piano sounds
3. Understand the difference between various moods and emotions created by music

## **2. Activity - Identifying Musical Characteristics (K-2, 3+)**

1. Have students listen to **CD tracks 8-12**
2. While listening, students should check off appropriate box when the music sounds loud or soft, fast or slow, and happy or sad
3. Some songs might be both loud and soft - use this a point of discussion in how music can portray countless different emotions
4. Explain to students the Italian terms that correspond to certain musical terms
  1. Fast - allegro
  2. Slow - andante
  3. Loud - forte
  4. Soft - piano

# Musical Characteristics Grades K-2, 3+

As you listen to each song, put a check mark in the box to show whether the song is fast or slow, loud or soft, and happy or sad.

Listen carefully...songs might be able to get more than one check mark!

	FAST	SLOW	LOUD	SOFT	HAPPY	SAD	CHANGES?
1							
2							
3							
4							
5							



# What to Expect at the Concert

## **See an orchestra**

What is an orchestra? An ensemble of people who play string instruments such as violins, violas, cellos, and basses. Also expect to see flutes, oboes, clarinets, bassoons, horns, trumpets, trombones, a tuba, timpani, drums and other percussion, and maybe even a harp. The conductor is the leader of this group of players. He or she will communicate to the players the meaning of the music score, having musicians play louder or softer, faster or slower, smooth or choppy.

## **Be in a large room with lots of other people**

Talk quietly with your neighbor until the concertmaster comes on to tune the orchestra. Then settle back in your seat and prepare to listen!

## **Sit quietly and listen to the music**

Listening to an orchestra is different from listening to other types of music. It is fine to tap your toes or move your fingers in time with the music. Remember though that others are watching and listening with you and you shouldn't do anything that would disturb their chance to watch and listen too!

## **Applaud at the end of the piece**

How do you know when that is? Sometimes you will have a printed program that tells you and sometimes the conductor will tell you if the piece has more than one part (or movement). Usually you don't applaud between the movements (that would be like thinking that the story is over after one chapter of the book!). The best way to know when a piece is over is to watch the conductor and when he or she puts their arms down and turns around, that's the time to applaud. Many times the music itself will tell you when it is time, too!

## **Listen for different things**

The person who wrote the music is making an individual statement. His or her piece won't be like any other. Try to figure out what makes the particular piece special. Is it because it is loud or soft? Is it because of the fast or slow notes? Does it make you feel happy, sad, angry, or excited? What message do you think the music is sending? Think about it, but please don't discuss it with your friends until after the concert. Also, listen to the sounds of the instruments. Sometimes certain instruments have the melody and others just accompany them. Try to find out who has the melody at every moment of the piece. Notice how different the oboe sounds when it plays with the violin. Listen for how each instrument sounds solo and in combination with others.

## **Have a good time!**

Music is fun all by itself. Let it make you think of things. Let it make you feel emotions. Make up a scene or story in your mind as you listen and see how it changes with the music. Don't just sit there – think about it and you will enjoy the concert even more!

# Post-Test (Grades K-2)

Name \_\_\_\_\_

1. Can you name one of the instrument families of the orchestra?

2. Can you name an instrument from the orchestra?

3. Can you name an instrument that has strings?

4. Can you name an instrument that you play by using air?



# Post-Test Lesson 1 (Grades 3+)

Name \_\_\_\_\_

1. Can you list the 4 instrument families of a symphony orchestra?

- 1.
- 2.
- 3.
- 4.

2. Can you name these instruments?



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_

3. Is this instrument from the Brass or Woodwind family?



\_\_\_\_\_

4. Is this instrument from the Percussion or String family?



\_\_\_\_\_

5. What does a string player use to create sound on their instrument?

\_\_\_\_\_

6. How do instruments from the percussion family create sound?

\_\_\_\_\_

# Post-Test Lesson 2 (Grades 3+)

Name \_\_\_\_\_

1. How many layers make up a forest?

\_\_\_\_\_

2. What are some things plants in the forest need to survive?

\_\_\_\_\_

3. The carbon \_\_\_\_\_ shows how carbon moves through areas on the earth in different forms

(Fill in the missing word)

4. What is one thing you can do to have a positive impact on the environment?

\_\_\_\_\_

5. Can you name your three favorite dinosaurs?

\_\_\_\_\_

# Post-Test Lesson 3 (Grades 3+)

Name \_\_\_\_\_

**1. What musical term defines the speed of a song?**

\_\_\_\_\_

**2. Does adagio mean slow or fast?**

\_\_\_\_\_

**3. What musical term deals with how loud or soft music is?**

\_\_\_\_\_

**4. Can you list three emotions that music can make you feel?**

\_\_\_\_\_