

ERIE *est. 1913*
PHILHARMONIC

STORMCHASERS

Concept by Music Director Daniel Meyer

**Curriculum Designed by Doreen Petri and
the Erie Philharmonic Education Committee**



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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. Can you name one type of cloud?

2. What is your favorite season, and can you describe it?

3. Describe the steps in which a cloud is formed

4. What are the three states of matter?

5. Describe the steps in which a thunderstorm is formed

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?

Concert Lineup

Music in bold will be performed on the in-school concert. All other music is available for the classroom exercises.

Visit eriephil.org/stormchasers for all audio files.

- 1. Overture to *Der fliegende Holländer* (The Flying Dutchman) - Wagner**
- 2. *Nocturnes, Nuages* - Debussy**
- 3. *Winter, from The Four Seasons*, Movement 1 & 3 - Vivaldi**
- 4. *Symphony No. 6*, Movement 4 - Beethoven**
- 5. *Grand Canyon Suite, Cloudburst* - Grofé**
- 6. *Thunder and Lightning Polka* - Strauss**
7. Musical Characteristic 1 - Beethoven, *Symphony No. 9* - Movement 2
8. Musical Characteristic 2 - Beethoven, *Symphony No. 5* - Movement 1
9. Musical Characteristic 3 - Beethoven, *Leonore Overture No.3*
10. Musical Characteristic 4 - Beethoven, *Piano Concerto No. 1* - Movement 2
11. Musical Characteristic 5 - Beethoven, *Symphony No. 9* - Movement 3

Listening Guide

Overture to *Der fliegende Holländer* (The Flying Dutchman) - Wagner

Richard Wagner's Overture to The Flying Dutchman is a surpassing achievement on two counts: it wonderfully synthesizes the opera's dramatic content by utilizing themes associated with characters and ideas; and it is, as an independent piece of music, a striking tone poem conjuring vividly the turbulent atmosphere of the sea.

In a sense, the sea is the opera's chief protagonist, the human characters being at the mercy of its impenetrable mysteries and caprices. The Dutchman, in vowing to sail the Cape in the face of all climatic odds, has invoked the devil, and in so doing, has provoked him. Cursed by the evil one to sail the seas through eternity, he can be saved from his fate only by the fidelity of a woman's love. Senta offers her love, but the Dutchman doubts its strength. Senta's proof is first tragic, then redemptive: She flings herself to a watery grave, but the power of her love breaks the curse. The Dutchman's ship sinks in a whirlpool, and he and Senta, transfigured, are united in death. The opera, its story based by Wagner on a section of Heine's *Memoirs of Herr von Schnabelewopski*, was premiered in Dresden on January 2, 1843. Because it was too advanced for an audience expecting another brilliant *Rienzi* - a big Wagner success in Dresden the year before - and due also to casting and staging problems, *Dutchman* sank after four performances.

Nocturnes - Debussy

Debussy's loveliness is nothing short of exquisite—and nowhere more than in the three symphonic movements that make up his *Nocturnes*: *Nuages* (Clouds), *Fêtes* (Festivals), and *Sirènes* (Sirens). Debussy's first orchestral work following the groundbreaking *Prélude à L'Après-midi d'un faune*, it stands as a series of distinct tone poems. Their genesis dates to 1892-94, when the composer embarked on writing *Trois scènes de crépuscule* ("Three Twilight Scenes"), which he described frankly as experiments in orchestral groupings. He gave up on that project, but several years later he recycled some of the material he had sketched into *Nocturnes*.

The title *Nocturnes* is to be interpreted here in a general and, more particularly, in a decorative sense. Therefore, it is not meant to designate the usual form of the Nocturne, but rather all the various impressions and the special effects of light that the word suggests. *Nuages* renders the immutable aspect of the sky and the slow, solemn motion of the clouds, fading away in gray tones lightly tinged with white. *Fêtes* gives us the vibrating, dancing rhythm of the atmosphere with sudden flashes of light. There is also the episode of the procession (a dazzling fantastic vision) which passes through the festive scene and becomes merged with it. But the background remains persistently the same: the festival with its blending of music and luminous dust participating in the cosmic rhythm. *Sirènes* depicts the sea and its countless rhythms and presently, amongst the waves silvered by the moonlight, is heard the mysterious song of the Sirens as they laugh and pass on. 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.

Winter, from *The Four Seasons* - Vivaldi

The feature of the *Four Seasons* that drew the most positive and negative attention when they were new was the one aspect that was largely ignored when, after two centuries of obscurity, they started to get played again in the 1950s and 1960s: their pictorial literalness. Vivaldi included a sonnet for each concerto explaining what was

Listening Guide

going on, supplying not just descriptions, but performance instructions. The sonnet verses are printed not only as prefaces to each concerto, but also in all the instrumental parts, in the midst of tempo and dynamic markings. This is something that can pass unnoticed by the modern audience, which consists of listeners who aren't looking at the music on the page. But in Vivaldi's day the audience for his publications consisted mostly of accomplished amateur players, who could play the Four Seasons with as many players as could gather around the part-books, or as few as six, as the highlight of a social gathering. They would have been keenly aware that the sounds they were making represented specific scenes.

Winter begins with shivering (in another remarkable chain of dissonances), chattering teeth and "running and stamping your feet every moment" to keep warm in snow and biting wind. The slow movement is a cozy fireside scene, "while the rain drenches everyone outside," the raindrops in pizzicato under the solo violin's melody. The finale begins by painting a picture of trying, not always successfully, to walk on ice without slipping, and concludes with the onslaught of "Sirocco, Boreas, and the other winds at war."

Symphony No. 6 (Pastoral), Movement 4 - Beethoven

The Pastoral is unique among Beethoven's symphonies in that it is the only one of the nine that does not adhere to the standard four-movement format. Instead, Beethoven casts it in five movements, with the last three fused into a more unified, tripartite span. The "Merry gathering" is full of peasant humor, but it's purveyed with immense sophistication, in triple meter. Anton Schindler was not always a reliable source, but his reminiscence about the nature of this third movement does sound plausible. "Beethoven," he wrote, "asked me if I had noticed how village musicians often played in their sleep, occasionally letting their instruments fall and keeping quite still, then waking up with a start, getting in a few vigorous blows or strokes at a venture, although usually in the right key, and then dropping to sleep again. Apparently he had tried to portray these poor people in his Pastoral Symphony." Here we have the oboe "falling awake" and entering off the beat, taking a couple of measures to get in sync with the violins' oom-pahs. Not many measures later, the second bassoon enters momentarily. Horns and other winds also pitch in to do their bit for the spirit of befuddlement. A middle section provides contrast of the heartiest sort before the Allegro proper returns, escalating into a riotous presto on the final page.

Cellos and basses suddenly shudder, pianissimo, and violins let loose scales in tiny staccato droplets. We have entered a new Allegro movement, and within a page the "Thunderstorm" breaks out in fortissimo fury, replete with the sounds of piccolo (good for depicting lightning), trombones, and timpani (none of which have been heard previously in this symphony). At its height, wrote Hector Berlioz in characteristically effusive fashion, "it is no longer just a wind and rain storm; it is a frightful cataclysm, a universal deluge, the end of the world."

The storm soon passes, with yodeling music serving as a link to the concluding Allegretto. The piccolo player and timpanist sit out the rest of the piece, though the trombones, with their ecclesiastical overtones, add their voice to the finale of thanksgiving. (Gratias agimus tibi—"We give thee thanks"—the composer wrote over a sketch for this movement.) The principal theme, a folk-like tune, pervades practically the whole movement. A

Listening Guide

secondary motif sounds reminiscent of the stuttering figure from the beginning of the symphony, adding a sense of symmetry to Beethoven's peaceable landscape

Grand Canyon Suite, *Cloudburst* - Grofé

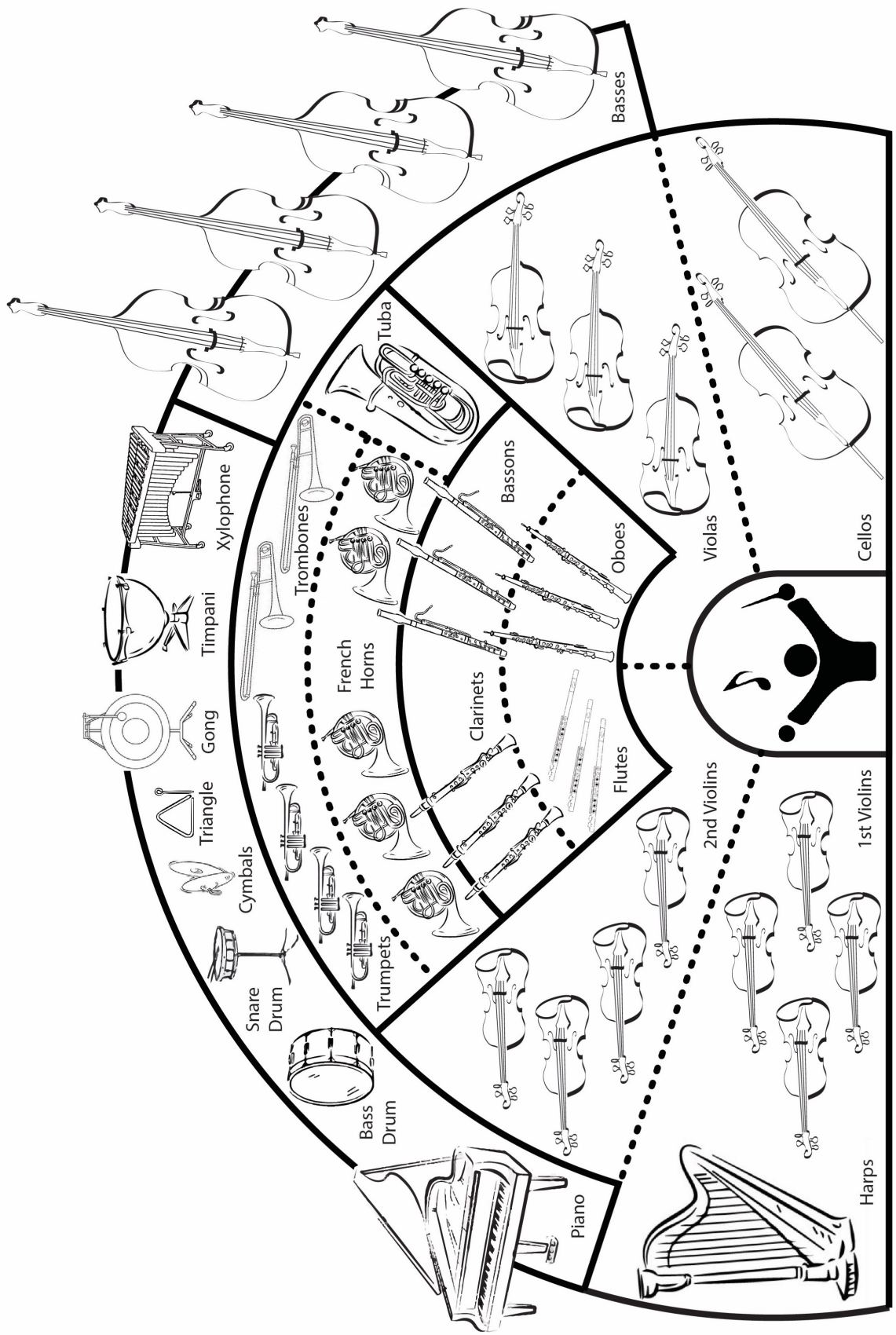
Grand Canyon Suite was composed in 1931, and indirectly won him an Academy Award in 1958 when Disney won the Best Live Action Short Film award for their visualization of Grofé's music. This suite by Disney was made to be used in the revived version of Fantasia. The movie was based on Grofé's own score notes. So, as the title suggests, the music depicts the many different scenes across this vast landmark.

Opening with a sweet theme from the upper strings and woodwind, *Cloudburst* adapts into a rich and lyrical theme. Cinematic in its set up, the rumblings from the basses and timpani provide us with an insight into this oncoming storm. A very different central section depicts the destruction and unpredictability of thunderstorms. Big scalar runs, loud brass and rumbling timpani all come together to create a cacophonous texture that shows the roaring storm from the skies. As the storm begins to clear, the moon appears from behind the clouds. The orchestra comes together for the most almighty resolution that the storm has passed and the Grand Canyon lives on with all its wildlife in tow. The thrilling end to the suite leaves the listener with the lasting thoughts of what the Grand Canyon symbolizes for them.

Thunder and Lightning Polka - Strauss

A Strauss waltz that premiered in February 1868 under the title *Sternschnuppe* (Shooting Stars) at the Vienna Artists' Association Hesperus Ball seemed to have evaporated, but musicological detective work revealed that the piece did not disappear—it was just retitled. It was programmed a month later with the title *Unter Donner und Blitz* (always called just Thunder and Lightning in English), and a press account clarifies that this was the piece played previously at the Hesperus Ball. Atmospheric sparkle was on Strauss's mind in this quick polka, but we will probably never know what inspired him to sacrifice shooting stars in favor of thunder and lightning. Possibly he wanted to avoid confusion with a *Sternschnuppen* waltz brother Josef had composed in 1860. In any case, the rumbling drums and crashing cymbals are pertinent to the subject.

Map of the Orchestra



Conductor



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 legendary composer Gustav Mahler) was appointed music director in 1947 and performed the orchestra's first pops concert in 1948. In 1950, the Erie Philharmonic sponsored its first important commission, Peter Mennin's (Erie native) "Concerto for Orchestra," which has established itself in the orchestral repertoire. The Erie Philharmonic Chorus began its great tradition in October of 1952, singing choruses from "La Traviata" under the direction of Fritz Mahler.

In 1947, Music Director Fritz Mahler established what would become the Erie Junior Philharmonic, which today still serves as an important part of the Philharmonic's educational activities. After then next Music Director, James Sample (1953-67), the orchestra continued its artistic achievements under the batons of John Gosling (1967-76), Harold Bauer (1974-76), Walter Hendl (1976-90), Eiji Oue (1990-96), Peter Bay (1996-99), and Hugh Keelan (2000-06).

In the summer of 2007, our current conductor Daniel Meyer was named the 12th Music Director of the Erie Philharmonic. Maestro Meyer has led the orchestra to never-before-seen heights with more than 40 sold out performances, record ticket sales, world premieres, life-changing educational programming and more. On January 23, 2022, the Erie Philharmonic returned home to a newly renovated Warner Theatre after a season of televised performances and outdoor concerts due to an industry-wide shutdown from the COVID-19 pandemic.

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

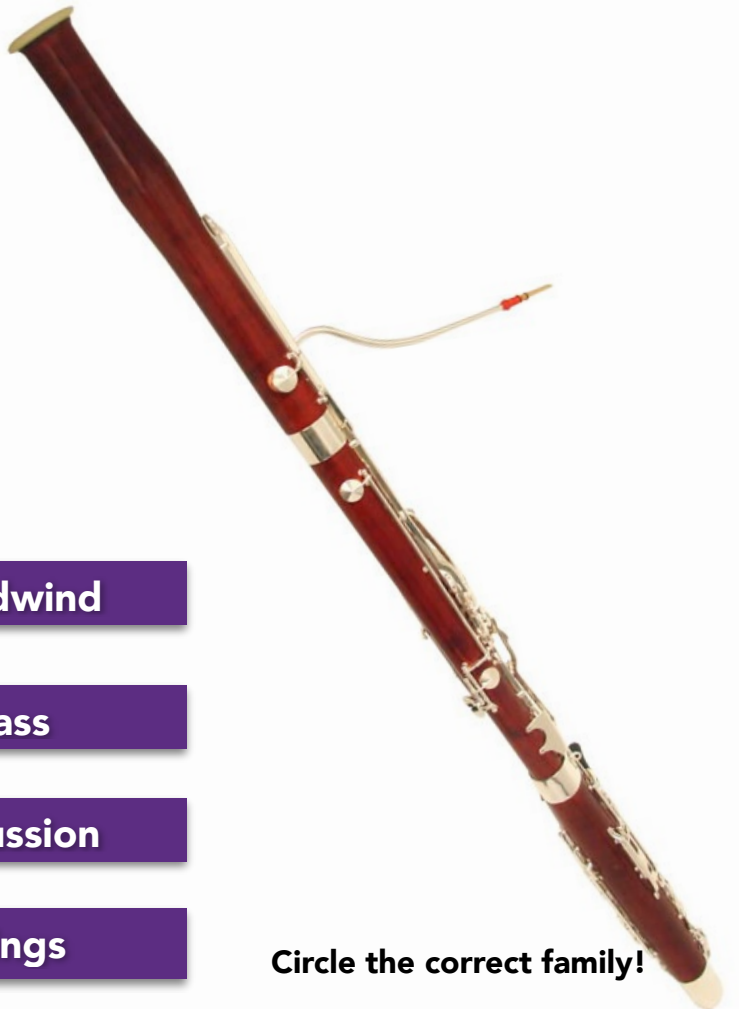
Percussion

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

Clouds

1. Objectives

1. To learn about how clouds form.
2. To learn the shapes of the three main types of clouds.
3. To learn the three states of matter: solid, liquid and gas.
4. To learn about the processes in the water cycle.
5. To learn how clouds are part of the water cycle.

2. Outcomes - I will be able to

1. Describe the steps in which a cloud is formed.
2. Name the three main types of clouds and describe their shape.
3. List the three states of matter and use water as an example.
4. Explain the water cycle, including evaporation and condensation, and how clouds are part of it.

Older students

1. Explain what causes climate change.
2. Describe how the water cycle can be impacted by climate change.
3. Relate how individuals alone and collectively can 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 Earth and Space Sciences

- 3.3.5.A4. Explain the basic components of the water cycle.
- 3.3.3.A5. Explain how air temperature, moisture, wind speed and direction, and precipitation make up the weather in a particular place and time.
- 3.3.5.A5. Differentiate between weather and climate. Explain how the cycling of water, both in and out of the atmosphere, has an effect on climate.

Science, Technology & Engineering, Environmental Literacy and Sustainability (STEELS) Standards

The newly adopted Pennsylvania Integrated Standards for Science, Technology & Engineering, and Environmental Literacy and Sustainability, and Pennsylvania Technology and Engineering Standards were developed jointly to ensure consistency, coherence and a cohesive K—12 integrated approach to science education in the Commonwealth. On July 16, 2022, the Pennsylvania Bulletin published the new standards, designed for implementation July 1, 2025.

Lesson 2 Continued

Seasons in Erie

1. Objectives - To learn

1. To learn about the four seasons that occur in Erie, Pennsylvania.
2. To learn how the changes in temperature and amount of precipitation create the seasons.
3. To learn how different types of storms are created.
4. To understand how climate change impacts the creation of storms.

2. Outcomes - I will be able to

1. Describe the four seasons of the year in my area.
2. Explain the different temperatures and types of precipitation in each of the four seasons.
3. Discuss how a thunderstorm, tornado, hurricane and snowstorm is created.
4. Name one way climate change has caused more storms in the United States.

Older students

1. Explain how climate change has affected the severity and frequency of storms in the US and globally.
2. Name three direct consequences of increased storm events.
3. Discuss how storms are tracked/monitored.

3. Standards Addressed

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Types of Clouds

45,000 feet

High-level



Cirrus (Ci)



Cirrostratus (Cs)



Cirrocumulus (Cc)

20,000 feet

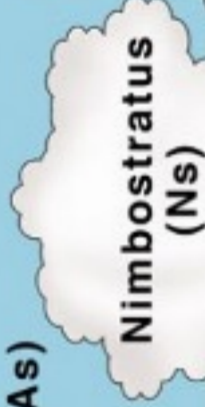
Mid-level



Altostratus (As)



Altostratus (As)



Nimbostratus (Ns)

6,500 feet

Low-level



Cumulus (Cu)



Stratocumulus (Sc)



Stratus (St)



Cumulonimbus (Cb)

Clouds

Teacher's Guide

Background Information

Clouds are made of tiny water droplets (or ice crystals if it's cold enough) that are located high in the atmosphere above the Earth's surface.

How Do Clouds Form?

Step 1: Water Vapor Changes into a Liquid

Although we can't see it, the first ingredient -- water -- is always present in the atmosphere as water vapor (a gas). But in order to grow a cloud, we need to get the water vapor from a gas to its liquid form.

Clouds begin to form when a parcel of air rises from the surface up into the atmosphere. (Air does this in a number of ways, including being lifted up mountainsides, lifted up weather fronts, and being pushed together by converging air masses.) As the parcel ascends, it passes through lower and lower pressure levels (since pressure decreases with height). Recall that air tends to move from higher to lower pressure areas, so as the parcel travels into lower pressure areas, the air inside of it pushes outward, causing it to expand. The further upward the air parcel travels, the more it cools. Cool air can't hold as much water vapor as warm air, so when its temperature cools down, the water vapor inside of the parcel becomes saturated and condenses into droplets of liquid water.

But by themselves, water molecules are too small to stick together and form cloud droplets. They need a larger, flatter surface on which they can collect.

Step 2: Water Needs to Attach to Something

In able for water droplets to form cloud droplets, they must have something—some surface—to condense on. Those "somethings" are tiny particles known as aerosols or condensation nuclei.

Just like the nucleus is the core or center of a cell in biology, cloud nuclei, are the centers of cloud droplets, and it is from this that they take their name.

Cloud nuclei are solid particles like dust, pollen, dirt, smoke (from forest fires, car exhaust, volcanoes, and coal-burning furnaces, etc.), and sea salt (from breaking ocean waves) that are suspended in the air thanks to Mother Nature and us humans who put them there. While we usually think of them as pollutants, they serve a key role in growing clouds because they're hygroscopic—they attract water molecules.

Step 3: A Cloud is Born!

It is at this point—when water vapor condenses and settles onto condensation nuclei—that clouds form and become visible. The type of cloud and altitude (low, middle, or high) it forms at is determined by the level where an air parcel becomes saturated.

Clouds

Teacher's Guide

There are three basic types of clouds according to their shape:

1. Cirrus – wispy or stringy
2. Stratus – in sheets or layers
3. Cumulus – heaped or in piles



Cirrus



Stratus



Cumulus

Clouds Are Complicated

CIRRUS

These are thin hair-like clouds completely made of ice crystals and are found high in the sky. These clouds indicate fair weather and do not produce rain. Cirrostratus clouds look like transparent thin sheets or layers. They are completely made of ice crystals.

STRATUS

These are low-lying clouds generally having a dark gray to white color. Fog at ground level is basically a stratus cloud. Nimbostratus clouds are dark clouds that bring continuous rain or snow. They have multiple layers and can be close to the surface of the earth.

CUMULUS

These fair-weather clouds have a fluffy cotton-like appearance. Cumulus clouds have a flat horizontal base and they generally do not have a great vertical height. Cumulonimbus clouds are cumulus clouds with great vertical height. Often referred to as thunder clouds because these clouds bring heavy rain.



Cirrostratus



Nimbostratus



Cumulonimbus

Clouds

Teacher's Guide

Activities

1. Give the students a copy of the cloud type diagram and explain the main types of clouds: cirrus, stratus and cumulus. Also explain that clouds take different forms (cirrostratus, nimbostratus, cumulonimbus) depending on the shape and location in the atmosphere and can indicate types of weather.
2. Show the following video about cloud types.
 1. All About Clouds for Kids: Types and Names of Clouds - FreeSchool - Bing video
3. Draw a picture of your school, home or favorite place on the bottom of an 8 ½" X 11" piece of paper and represent the 3 main types of clouds in the sky by using cotton balls and glue. Be sure to show each cloud shape and where it is located in the sky. (1) cirrus-wispy, curly; high altitude, (2) stratus – layered; low to the ground, (3) cumulus – fluffy, circular; low to mid-level.

Materials: paper, pencils, glue, cotton balls, crayons or colored pencils

Discussion questions

1. Ask the students if they have ever seen clouds in the sky. Can they describe what they saw? If it is a cloudy day, can you go outside to look at the sky?
2. Discuss the 3 states of matter using water as an example (gas, liquid, solid).
3. Do they understand the terms evaporation and condensation? Can they give examples of when they have seen evidence of these processes?
4. (evaporation – steam coming from a pan of boiling water; condensation – dew on plants in the morning or tiny droplets on the windshield of a car)
5. Review the water cycle and how clouds can be part of it.
6. Older students
 1. Consider the causes and consequences of climate change. As humans continue to remove and burn fossil fuels (coal, oil and natural gas), this adds greenhouse gases to the atmosphere (carbon dioxide, water vapor, nitrous oxide, methane, etc.). The greenhouse gases trap the energy from the sun close to the earth's surface and this heats up our planet. This impacts the water cycle with negative impacts: glaciers melting, thermal expansion of ocean water and increased storms and cloud formation, just to name a few.
7. How can you reduce your impact on climate change?



Seasons

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 moderate temperatures and precipitation. Each season presents the possibility of different weather patterns, specifically storms, due to the changes in temperature, amount of precipitation and wind velocity.

SPRING

Spring is the season of the year between winter and summer during which temperatures gradually rise. It is generally defined in the Northern Hemisphere as extending from the vernal equinox (day and night equal in length), March 20 or 21, to the summer solstice (year's longest day), June 21 or 22, and in the Southern Hemisphere from September 22 or 23 to December 22 or 23. Weather during the spring season in Erie, PA varies due to the occurrence of high-speed winds at times as temperatures change. Spring's more intense sunlight contributes to its storminess, too. The more heat there is in the atmosphere, the greater the chance for convection. And convection—a fancy word for the transfer of heat from one place to another by motion—triggers rain and thunderstorms caused by the development of cumulonimbus clouds.

SUMMER

The summer season has characteristic sunny, warm days with periodic episodes of rain. The summer storm season in the United States starts in late spring and runs through the summer, sometimes into the fall. Late May and early June is the period when severe storms are most likely. Thunderstorms can produce hail, strong winds and tornadoes. Tornadoes are not common near Erie, PA but there was a severe one in 1985. In Albion, PA, a community southwest of Erie, a ten-block area was destroyed and nine people lost their lives.

FALL

Fall is the season between summer and winter during which temperatures gradually decrease and the days get shorter. It is often called fall in the United States because leaves fall from the trees at that time. Autumn is usually defined in the Northern Hemisphere as the period between the autumnal equinox (day and night equal in length), September 22 or 23, and the winter solstice (year's shortest day), December 21 or 22; and in the Southern Hemisphere as the period between March 20 or 21 and June 21 or 22. Because temperatures are changing, weather changes can occur from warm spells called "Indian Summer" to very cold snaps with rain, sleet or even snow. The reason leaves appear to change color in the fall is because as the duration and intensity of sunlight wanes, chlorophyll, the green pigment in leaves, breaks down and other pigments like xanthophylls (yellow), carotenes (orange) and anthocyanins (red, purple or blue) are exposed.

Seasons

Teacher's Guide

In some areas in the United States, hurricanes occur and the ocean waters heat up. Hurricane season runs June through November every year, with August through October being peak months for tropical cyclone events.

WINTER

Winter is the coldest season of the year in polar and temperate climates. It occurs after autumn and before spring. The tilt of Earth's axis causes seasons; winter occurs when a hemisphere is oriented away from the Sun. Different cultures define different dates as the start of winter, and some use a definition based on weather. In Erie, PA, winter can begin in November and last until late March or early April with characteristic snow accumulations accompanied by periodic thawing episodes. Being a coastal city on Lake Erie, definitely affects our weather patterns.

Seasons

Teacher's Guide

Activities

1. Review the four seasons experienced in Erie and why they occur in this region.
2. Discuss the characteristics of each season related to temperature and types of precipitation. As you review each season, explain how certain types of storms can occur during each one.
3. Show the videos on each type of storm.
4. Using our senses...
 1. If a storm is forecasted, could the students do the following during and after the storm?
 2. Have the students write a reflection in a form appropriate for their age and skill level to describe what they saw and heard during the storm. After the storm occurred, could they go outside to experience it even more? What changes do they see and hear? What do they smell? What can they touch/feel?
 3. If a storm has not been forecasted at a convenient time, the students could reflect on a storm they have experienced in the past.

Discussion questions

1. How do you find out what the weather will be for the day? For the week?
2. How can you prepare for weather changes?
3. What safety measures can be taken if a storm is coming?
4. What are "storm chasers"?
5. Older students
 1. Consider the causes and consequences of climate change. As humans continue to remove and burn fossil fuels (coal, oil and natural gas), this adds greenhouse gases to the atmosphere (carbon dioxide, water vapor, nitrous oxide, methane, etc.). The greenhouse gases trap the energy from the sun close to the earth's surface and this heats up our planet. This impacts the water cycle with negative impacts: glaciers melting, thermal expansion of ocean water and increased storms and cloud formation, just to name a few.

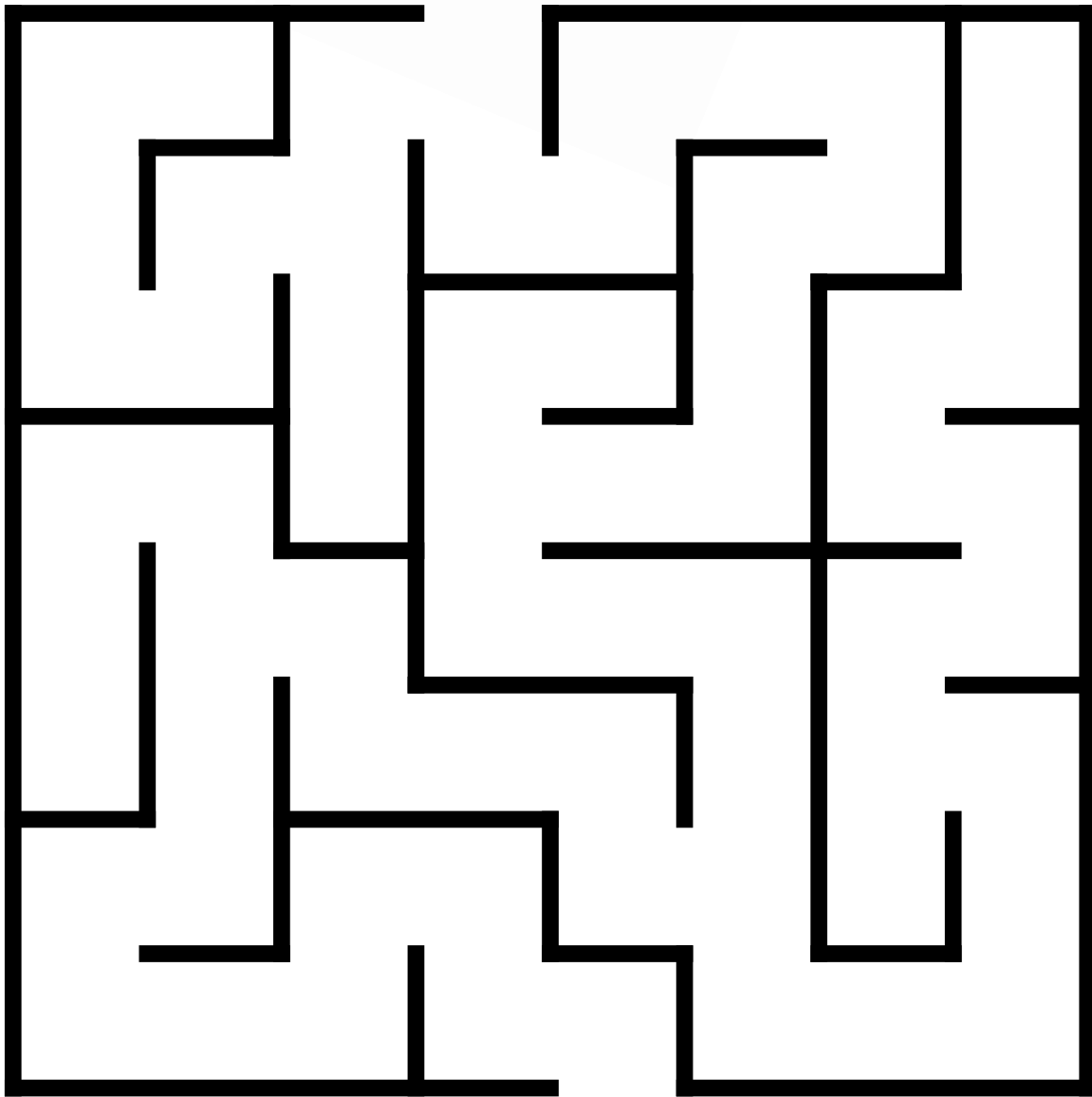
How has climate change affected the severity and frequency of storms in the US? Globally?

What are the direct consequences of increased storm events?

How are storms tracked/monitored?

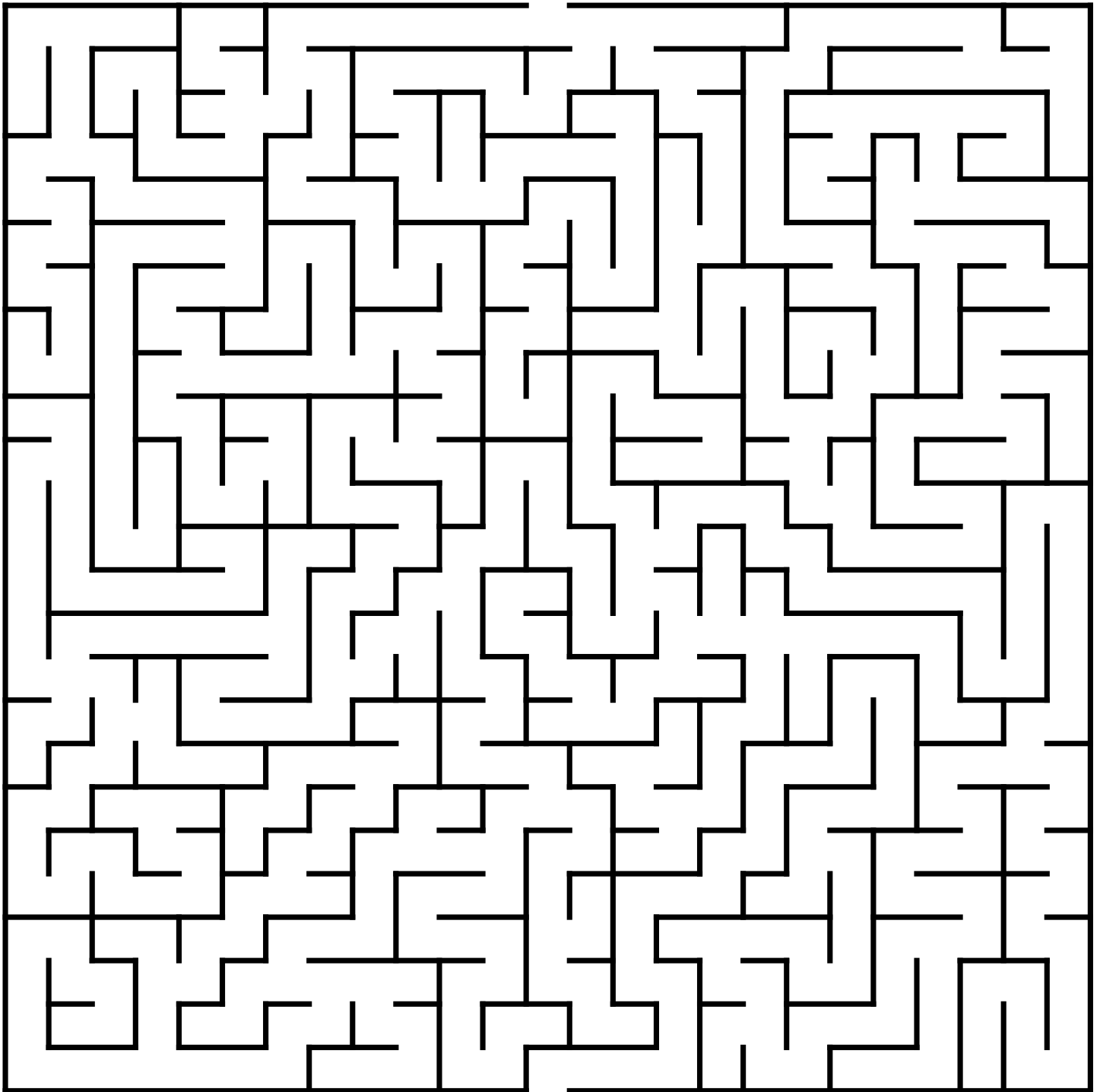
Maze - Grades K-2

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+

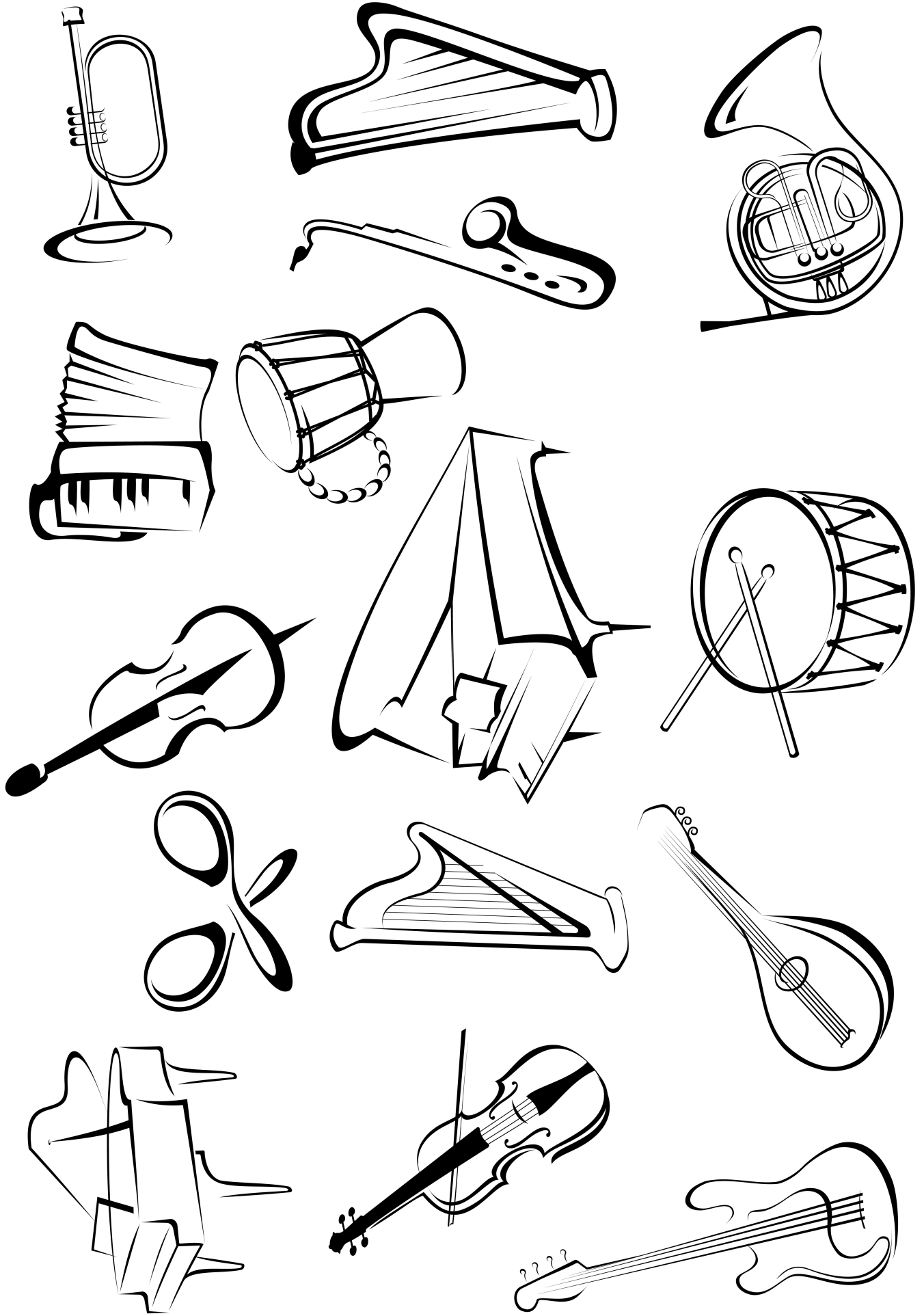
Word Bank

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 specified tracks from website (eriephil.org/stormchasers)
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. Can you name one type of cloud?

2. What is your favorite season, and can you describe it?

3. Describe the steps in which a cloud is formed

4. What are the three states of matter?

5. Describe the steps in which a thunderstorm is formed

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?
