Houston Grand Opera
Student Lessons
For All Core

TEKS-aligned activities and lessons
to accompany
Houston Grand Opera study guides
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**KEY:**  
E = Elementary School Level Activities  
M = Middle School Level Activities  
H = High School Level Activities
Lesson Title: Welcome to the World of Opera!

Subject: Language Arts

Integrated Subjects: Fine Arts

Grade levels: Elementary School, Middle School, High School

Integrated Subjects: Fine Arts

Objective: Students will learn about the basic components of opera by creating a foldable layered book with definitions and pictures. Students will learn the following vocabulary that you may select from the list below.

Materials Needed: 4 sheets of 8 ½ x 11 paper per student, glue, pencils, crayons, access to internet (YouTube education and HGO websites), The opera vocabulary and definitions page at the front of this guide

Instructions on how to make foldable layered book found at this link: http://foldables.wikispaces.com/Foldables
You may pre-make the books or have the students create the books themselves depending on age of students and time.

Lesson:
*This lesson may be conducted over the course of several days or weeks.

Have students create the foldable layered book. As you teach the different components and vocabulary of opera, students will label each page with the word, a definition, and a picture (may be hand drawn or selected from a magazine or the internet)

Introduce the word opera to the students by explaining that it is a story set to music. The performers sing the story. Opera is a comprehensive art form that contains musical arts, drama, visual arts, and dance.

Access the HGO multimedia website to access video clips to show the students. http://www.houstongrandopera.org/Multimedia/

Clips are also available on the YouTube education site (type in opera or opera for kids)

Each day select a word or words to discuss with the students. Utilize the clips on the HGO site linked above or YouTube education as necessary.

Older students should write out words and definitions in accordance with proper writing rules and can follow dictionary formatting if you wish.

Vocabulary words:
**Opera** - A show that uses singing instead of speaking to tell the story, and is accompanied by instrumental music.

**Soprano** - The highest female voice. Often plays the romantic lead or younger girls.

*Suggested clips/songs - Pamina’s Lament - The Magic Flute, Chacun le Sait Chacun le Dit - La Fille du regiment
*Known performers – Renee Fleming, Natalie Dessay, Joyce DiDonato

**Mezzo Soprano** - The middle female voice, usually darker and fuller than a soprano. Often plays witches, young boys or mothers.

*Suggested clips/songs – Stride La Vampa – Il Trovatore, Voi Che Sapete – The Marriage of Figaro
*Known Performers – Susan Graham, Denyce Graves, Dolora Zajick

**Tenor** – The highest male voice. Often plays the romantic lead.

*Suggested clips/songs – Mis a Mis - La Fille du regiment, Nessun Dorma - Turandot
*Known Performers – Juan Diego Florez, Ramon Vargas, Jonas Kaufmann, Lawrence Brownlee

**Baritone** – The middle range male voice. Often plays heroic roles.

*Suggested clips/songs – The Bird catcher song - The Magic Flute, Toreador - Carmen, Largo al Factorum - The Barber of Seville
*Known Performers – Nathan Gunn, Gerald Finley, Mariusz Kwiecien

**Bass** – The lowest male voice. Often plays fathers, priests, or villains.

*Known Performers 0- Bryn Terfel, Samuel Ramey, Eric Owens, Renee Pape, Keith Miller

**Composer** – A person who writes music.

*Show the students a blank sheet of composition paper. Show them how a composer writes notes in the spaces and on the lines to create music.
Known Opera Composers – Puccini, Verdi, Mozart, Handel, Donizetti, Wagner

**Libretto** – The text or words of an opera. The word translated means “little book.” A person who writes the words to an opera is known as a librettist.

*Select a familiar tune that students will be able to practice writing words for. You may use reading selections that you are currently studying and have students tell the story to music by writing a brief summary and putting it to music. Students can perform their completed songs for each other.
**Orchestra** – A group of people who play different instruments together to create music. The person leading the orchestra is a conductor

*Known Opera Overtures* – The Magic Flute – Mozart, Hansel and Gretel – Humperdink, Carmen - Bizet

*Teach the students about the different instruments and groups of instruments that make up an orchestra. You can play sounds of the different instruments to help students identify them. You can use A Young Persons Guide to the Orchestra by Benjamin Britten or Carnival of the Animals by Camille Saint Saens if you wish.

*Play orchestral music from an operatic overture and ask students to identify the different instruments that they hear. Students can also pretend to conduct by “air conducting” while the music plays.

**Chorus** – A group of singers who sing and act en masse, never as soloists

*Suggested Clips/Songs* – Anvil Chorus - Il Trovatore, Drinking Song – La Traviata

**Aria** - A musical piece for solo voice focusing on emotional expression

**Assessment:** Examine the layered books and determine if students correctly defined the vocabulary and that their images are a correct representation of the vocabulary as well. Quiz students on the vocabulary.

**Differentiation/Extensions:** Add or delete pages of the book to make it as long or as short as you wish.

**TEKS**

**Elementary School English Language Arts**


4th – 110.15.b.2.A, 110.15.b.2.B, 110.15.b.2.E, 110.15.b.13.B, 110.15.b.21, 110.15.b.22, 110.15.b.27.A, 110.15.b.28


**Middle School English Language Arts**


**High School English Language Arts**


High School English Language Arts Level II– 110.32.b.1.A, 110.32.b.1.D, 110.32.b.1.E, 110.32.b.12.A, 110.32.b.18, 110.32.b.19

High School English Language Arts Level III- 110.33.b.1.A, 110.33.b.1.D, 110.33.b.1.E, 110.33.b.19, 110.33.b.20

High School English Language Arts Level IV- 110.34.b.1.A, 110.34.b.1.D, 110.34.b.1.E, 110.34.b.18, 110.34.b.19

Lesson Title: Opera Roles- How the Theater Works

Subject: Language Arts, Fine Arts

Integrated Subjects: Social Studies

Grade levels: Elementary School, Middle School, High School

Objective: Students will learn the roles of different people who help make an opera or theatrical performance possible. They will be able to identify the roles and responsibilities of each person.

Materials Needed: Writing materials, Chart paper

Lesson: Many people come together to create an operatic or theatrical performance. Aside from the singers themselves, there are numerous individuals who work backstage and behind the scenes to create a good and memorable performance. Below are listed the numerous roles people have that are necessary in developing an opera.

Activity 1

1. Use a bubble map and place the word “Opera Roles” in the center. Write down the various other roles that people have in creating an opera on the bubble map.
2. Ask students to select one of the roles and create a new bubble map with the role listed in the center bubble and the responsibilities they have on the outside bubbles.

Activity 2

1. Use a cause and effect map to show and discuss what would happen if a person did not fulfill their responsibility. For example, if there was no librettist, how would that affect the performance? What if the role of the prop master did not exist? How would this affect the organization of the show? What would be the benefits or negative consequences of eliminating this role?
2. Have students share with each other why each role is important in being able to execute a good performance.

Choreographer – The person responsible for the dancing in a performance.

Conductor - The person who leads the orchestra. Opera to Go! functions without a conductor, though the music director conducts primary music rehearsals.

Composer - The person who reads the libretto, then writes the music based on the story and words.

Costume Designer – The individual in charge of creating the clothing that the performers will wear on stage.
**Librettist** - The person who writes the words of an opera.

**Libretto** - Literally “little book”, this is the text or words of an opera.

**Prop Master** – The individual in charge of all props and objects used by performers and on the stage during a show

**Set Designer** – The individual responsible for the creation and building of the scenery, background, and items used on stage for a performance.

**Stage Director** - The person who decides how the singers will move on stage and how they will act while they are singing their parts.

**Stage Manager** – The individual responsible for overseeing the technical aspects of a performance such as microphones, lights, and set changes.

**Assessment:** Quiz students on the vocabulary and determine if they adequately were able to make logical conclusions about the importance of each person’s role.

**Differentiation/Extensions:** Have students work in small groups assigning each one a word from above. Have them collaborate together on creating an oral presentation to share with the class. You may also have groups create posters or projects with visuals for an assigned word or they may work as individuals.

**TEKS**

**Elementary School Fine Arts**

K Theater Arts – 117.4.b.5.C, 117.4.b.5.D

1st Grade Theater Arts – 117.5.b.5.C, 117.5.b.5.D

2nd Grade Theater Arts – 117.6.b.5.C, 117.5.b.5.D

3rd Grade Theater Arts – 117.7.b.3.A, 117.7.b.5.C, 117.5.b.5.D

4th Grade Theater Arts – 117.8.b.5.D

5th Grade Theater Arts – 117.9.b.5.D

**Middle School Fine Arts**

6th Grade Theater Arts – 117.34.c.5.D

7th Grade Theater Arts – 117.37.c.3.C, 117.37.c.5.D
8th Grade Theater Arts – 117.40.c.5.D

**High School Fine Arts**

Theater Arts Level I – 117.64.c.5.D
Theater Arts Level II – 117.65.c.5.D
Theater Arts Level III – 117.66.c.5.D
Theater Arts Level IV – 117.67.c.5.D

**Elementary School English Language Arts**

4th – 110.15.b.2.A, 110.15.b.2.E, 110.15.b.24.C
5th – 110.16.b.2.A

**Middle School English Language Arts**

6th – 110.18.b.2.A, 110.18.b.2.B, 110.18.b.2.E
8th – 110.20.b.2.A, 110.20.b.2.B, 110.20.b.2.D, 110.20.b.2.E

**High School English Language Arts**

High School English Language Arts Level I - 110.31.b.1.A, 110.31.b.1.D, 110.31.b.1.E
High School English Language Arts Level III - 110.15.b.1.A, 110.15.b.1.D, 110.15.b.1.E
High School English Language Arts Level IV - 110.16.b.1.A, 110.16.b.1.D, 110.16.b.1.E
High School Reading I, II, III – 110.47.b.2.A, 110.47.b.4.A, 110.47.b.4.G
Lesson Title: Compare and Contrast

Subject: Language Arts

Integrated Subjects: Fine Arts

Grade levels: Elementary School, Middle School

Integrated Subjects: Fine Arts,

Objective: Students will enhance and use their observational skills by comparing and contrasting the book and story of the opera with the actual performance.

Lesson: Most operas are based off of a piece of literature or story that has already been published. Select a book of the story of the opera you will be attending and read it to the students in class prior to the performance. Use chart paper to create a list of characters in the book and create a flow map of the story to show how it progresses and how the problem is solved. Add information regarding the setting and other elements you feel are important to the analysis.

After students see the performance, have them create another list on chart paper of the characters and a flow map of the story.

Have them discuss and share what was the same and what was different in the book and performance by charting it on a Venn diagram.

Ask students various questions about which version of the story they preferred and why and have them write a reflection in their journal of the performance. Students may include drawings if you wish.

Assessment: Were students able to correctly identify what was the same and what was different between the book and the performance? Assess journals for correct observations and proper writing.

Differentiation/Extensions: Have students work in pairs or small groups. Have them compare their diagrams and observations with others.

TEKS:

Elementary School English Language Arts


4th – 110.15.b.3, 110.15.b.5, 110.15.b.6, 110.15.b.21, 110.15.b.22, 110.15.b.27.A


Middle School English Language Arts

6th – 110.18.b.3.C, 110.18.b.5, 110.18.b.10.D


8th – 110.20.b.5, 110.20.b.25.A
Lesson Title: Sing-a-Conversation

Subject: Language Arts

Integrated Subjects: Fine Arts

Grade levels: Elementary School

Objective: Students will learn and understand how words can be put to music to communicate with others conduct a dialogue between two people and tell a story.

Lesson:

Model: Invite a student to sit with you and have a conversation with you on any topic. Keep it simple and uncomplicated (talk about a pet, what they did over the weekend, etc…).

Invite two students to come up and have a conversation on another simple topic. This time, record their conversation by writing it down. You can use alternating colors to indicate who is speaking and to create a visual for your other students who are observing or type it on a computer/smart board as if you are writing a script. Allow the conversation to last for about 6-10 sentences. These sentences are now your “libretto.”

Have students then discuss a song or tune that can be used as an accompaniment for the conversation. You can do this as a whole group or put the students in pairs or small groups and have them work together to develop the music for the conversation. Try using simple tunes that they may be familiar with such as Twinkle, Twinkle. If you would like to allow for more creativity, have students create their own songs and music for their “libretto.”

Invite students to perform for one another. Compare and contrast performances by observing which tunes were selected and why. Did the words fit into music or did they need to adjust the music to fit the words? Is it easier to understand what is happening when speaking or singing? How can singers be best understood when performing?

Assessment: Were students able to transfer their verbalizations into written form following proper writing conventions? Were students able to establish a musical tune for their written dialogue?

Differentiation/Extensions: Select a specific topic for students to write and sing about. You may also select a section or part from a book and use an already established dialogue between characters for students to sing.

TEKS

Elementary School English Language Arts


4th – 110.15.b.1, 110.15.b.5, 110.15.b.6.C, 110.15.b.17, 110.15.b.21, 110.15.b.22, 110.15.b.27.A, 110.15.b.28

5th – 110.15.b.1, 110.15.b.5, 110.15.b.16.A.iii, 110.15.b.21, 110.15.b.22.A, 110.15.b.27.A, 110.15.b.28
Lesson Title: Character Analysis

Subject: Language Arts

Integrated Subjects: Fine Arts

Grade levels: Elementary School, Middle School, High School

Objective: Students will be able to analyze a character in a story and use that analysis to draw conclusions about the story and think more critically about the plot.

Lesson: After your students have seen the performance, have each of them select a character to write about. Select from below (based on grade level) what aspects of the character you want your students to examine.

1. Character appearance – Hair color, height, clothing, etc…
2. Voice and Words – low, high, regular phrases spoken, unusual sounds
3. Physical Actions – physical movements such as style of walking or physical quirks
4. Choices – decisions made by the character and the consequences, were there unexpected choices
5. Relationship to others in the story – how the character connected to others and how he/she know them, did relationships change based on choices made
6. Personal History – past experiences, origin, is where the character at now a result of things in the past
7. Emotions – What feelings the character experienced through the story, what caused the feelings to change as the story progressed

You may ask students to carry out this analysis using a graphic organizer of your choice or have them simply address the seven items above and then write their analysis using writing strategies taught in class. Compare writings to see if students came up with similar or different observations on the same characters.

Assessment: Did students make correct and accurate observations and judgments about the characters? Where they able to make logical inferences about characters? Assess proper writing and grammar conventions.

Differentiation/Extensions: Have students write a story or rewrite the literature studied from the perspective of one of the characters

TEKS

Elementary School English Language Arts


4th – 110.15.b.3.B, 110.15.b.6.B, 110.15.b.8, 110.15.b, 110.15.b.20, 110.15.b.21, 110.15.b.22

5th – 110.16.b.5, 110.16.b.6.B, 110.16.b.8, 110.16.b.20, 110.16.b.21, 110.16.b.22

Middle School English Language Arts

6th – 110.18.b.5, 110.18.b.8, 110.18.b.19, 110.18.b.20, 110.18.b.21

7th – 110.19.b.5, 110.19.b.8, 110.19.b.19, 110.19.b.20, 110.19.b.21

8th – 110.20.b.5, 110.20.b.6.B, 110.20.b.8, 110.20.b.19, 110.20.b.20, 110.20.b.21

High School English Language Arts

High School English Language Arts Level I – 110.31.b.4, 110.31.b.5.B, 110.31.b.7, 110.31.b.17, 110.31.b.18, 110.31.b.19

High School English Language Arts Level II – 110.32.b.2.b, 110.32.b.4, 110.32.b.7, 110.32.b.17, 110.32.b.18, 110.32.b.19

High School English Language Arts Level III – 110.33.b.4, 110.33.b.5.B, 110.33.b.7, 110.33.b.17, 110.33.b.18, 110.33.b.19

High School English Language Arts Level IV – 110.34.b.5.B, 110.34.b.7, 110.34.b.17, 110.34.b.18, 110.34.b.19

High School Reading I, II, III – 110.47.b.3.B, 110.47.b.4.D, 110.47.b.8.B
Lesson Title: Opera Poetry

Subject: Language Arts

Integrated Subjects: Fine Arts

Grade levels: Elementary School, Middle School, High School

Objective: Students will write a poem about an operatic performance

Materials Needed: Paper and writing tools

Lesson: After students watch the performance, instruct them to write a poem about what they saw. Poems can be in any style and any length in accordance with your ELA curriculum for your grade level.

Here is a brief list of poetry styles that you may select from:

- Haiku
- Sonnet
- Limerick
- Ode
- Ballad
- Abecedarian
- Prose
- Epigram

Students can create drawings or collages to go with their poems. Display them in class or the hallway.

Assessment: Students will be assessed on creativity and on following the format of the poetry style selected.

Differentiation/Extensions: Number of stanzas and lines written can be modified for students that are at lower or higher learning levels.

Have students write poems about opera using the vocabulary in the first lesson. Collect all poems to create a class book of opera poetry.

TEKS

Elementary School English Language Arts

K- 110.11.b.2.C, 110.11.b.2.D

1” – 110.12.b.8
2nd – 110.13.b.7
3rd – 110.14.b.6
4th – 110.15.b.4
5th – 110.16.b.4

Middle School English Language Arts

6th – 110.18.b.4, 110.18.b.6, 110.18.b.15.B
7th – 110.19.b.4, 110.18.b.7, 110.18.b.15.B
8th – 110.20.b.4, 110.18.b.8, 110.18.b.15.B

High School English Language Arts

High School English Language Arts Level I – 110.31.b.3, 110.31.b.9, 110.31.b.14.B
High School English Language Arts Level II – 110.32.b.3, 110.32.b.10, 110.32.b.14.B
High School English Language Arts Level III – 110.33.b.3, 110.33.b.11, 110.32.b.14.B
High School English Language Arts Level IV – 110.34.b.3, 110.34.b.12, 110.34.b.14.B
Lesson Title: Your Type of Archetype

Grades: Elementary School, Middle School

Subject: Language Arts

Integrated subjects: Theater

Objective: Students will become familiar with common characters used in the theater and learn how to make logical connections between varying characters through writing and dialogue.

Needed Materials: writing materials

Lesson:
Operas are full of fascinating characters. Opera characters are typically based on various archetypes. An archetype is a style of character or person that is a model for all others. Below is a list of archetypes:

Princess
Superhero
Fool
Nerd
Airhead
Cowboy
Nagging Mother
Trickster
Spoiled Teenager
Villain
Hippie
Wise Old Man
Child
Witch
Rebel
Drama Queen
Business Tycoon
Athlete
Innocent Maiden
Politician

Lesson 1: Have students brainstorm archetypes. Use bubble maps or circle maps to write descriptions and characteristics of the various archetypes so students have a better understanding of them. After students have an understanding of what an archetype is and the many that exist, compile a list and then write all the archetypes on a piece of paper and cut them out into strips. Place all the strips into a can or jar and have students draw out two. Have them compose a story using the two archetypes they pull out of the can. Have them use a story map to determine the setting, character details, the plot and resolution. Follow the steps of the writing process as the write, edit, and revise.

Lesson 2: After students watch the opera, ask them what archetypes they saw in the performance. What did the performer do to convey the characteristics of that archetype?

Assessment: Were students able to accurately depict characteristics associated with different archetypes? Did they use appropriate descriptive terms to write, discuss, and interpret similarities and differences between characters? Did students apply proper writing and grammar conventions to their written products?

Differentiations and Extensions: Have students play charades with the list of archetypes. Have students write a story where a character starts off as portraying a particular archetype and then changes to another archetype by the end of the story.

TEKS
Elementary School English Language Arts


4th – 110.15.b.3.B, 110.15.b.6.B, 110.15.b.15, 110.15.b.16.A, 110.15.b.20, 110.15.b.21, 110.15.b.22

5th – 110.16.b.6.B, 110.16.b.15.A, 110.16.b.16, 110.16.b.20, 110.16.b.21, 110.16.b.22

Middle School English Language Arts

6th – 110.18.b.14, 110.18.b.15.A, 110.18.b.19, 110.18.b.20, 110.18.b.21


8th – 110.20.b 14, 110.20.b.15.A, 110.20.b 19, 110.20.b 20, 110.19.b 21

High School English Language Arts

High School English Language Arts Level I – 110.31.b.5.B, 110.31.b.14, 110.31.b.17, 110.31.b.18, 110.31.b.19

High School English Language Arts Level II – 110.32.b.2.B, 110.32.b.13, 110.32.b.14, 110.32.b.17, 110.32.b.18, 110.32.b.19

High School English Language Arts Level III – 110.33.b.5.B, 110.33.b.13, 110.33.b.14.A, 110.33.b.17, 110.33.b.18, 110.33.b.19

High School English Language Arts Level IV – 110.34.b.13, 110.34.b.14.A, 110.34.b.17, 110.34.b.18, 110.34.b.19
Lesson Title: I Feel Like Singing

Grades: Elementary School, Middle School, High School

Subject: Language Arts

Integrated subjects: Fine Arts

Objective: Students will be able to learn to associate rhythm, tempo, and sound in music with feelings and emotions. They will be able to understand how music enhances storytelling.

Needed Materials: Musical selections listed below, writing and drawing materials, journals

Lesson: When we hear music we can feel different emotions. Sometimes we associate certain songs with specific events or times in our lives. There are many parts of a song that help us to understand what the composer wants us to feel as we listen and watch opera. Here are some famous pieces of music that you can play for students to help you discuss with them how music impact stories and emotions (feel free to use other pieces that you think would work).

Ride of the Valkaries – Wagner (The Ring)

Meditation – Massenet (Thais)

Military March - Donizetti (The Daughter of the Regiment)

Bridal March – Wagner (Lohengrin)

Largo Al Factorum – Rossini (The Barber of Seville)

Papageno’s Song – Mozart (The Magic Flute)

Brother Come and Dance with Me - Humperdinck (Hansel and Gretel)

Una Furtiva Lagrima – Donizetti (Elixir of Love)

Royal March – Verdi (Aida)

Lesson 1: Give students a large piece of manila or white construction paper folded into 3 different sections. Select three pieces of music to play excerpts from and when each selection is played, have them draw a picture of what they are feeling or what they believe is happening in the story at this time in the opera.

Lesson 2: Play a piece of music and have students write a story about what is happening based on what they hear. You may choose to play one style of music for the first part of the
story, another style for the middle part or plot, and a final musical selection to represent the resolution or conclusion.

Lesson 3: After students view an operatic performance, discuss how the music made them feel. What did the music sound like when the characters were happy? Sad? Did the music change depending on what was happening? When different characters appeared on stage, how did they music help you know they were there and what they were feeling? Would it make sense to play happy music when something serious was happening or vice versa?

**Assessment:** Were students able to draw and make logical connections between music and elements of feelings and emotions associated storytelling and writing. Did students follow basic writing conventions?

**Differentiations and Extensions:** Have students first develop a story and then write music or a simple tune to convey the feelings of the story or a character.

Have students select a song (from any genre or time period) that helps express how they felt at a particular time in their life. Have students share why they picked the song and how it struck their emotions.

**TEKS**

**Elementary School English Language Arts**

K - 110.11.b12.A

1st – 110.12.b.11, 110.12.b.16.A


4th – 110.15.b.8, 110.15.b.14.B


**Middle School English Language Arts**


8th – 110.20.b.8, 110.20.b.13.A

**High School English Language Arts**

High School English Language Arts Level I – 110.31.b.7, 110.31.b.12.B
High School English Language Arts Level II – 110.32.b.7, 110.32.b.12.B
High School English Language Arts Level III – 110.33.b.7
High School English Language Arts Level IV – 110.34.b.7

**Elementary School Fine Arts**

K Music – 117.3.b.3.B, 117.3.b.4.B

1st Grade Music – 117.6.b.1.C, 117.6.b.5.C, 117.6.b.6.A

2nd Grade Music – 117.9.b.5.A, 117.9.b.5.C, 117.9.b.6.A


4th Grade Music – 117.15.b.5.A, 117.15.b.5.D, 117.15.b.6.A, 117.15.b.5.B


**Middle School Fine Arts**

6th Grade Music – 117.33.c.5.A, 117.33.c.5.D, 117.33.c.6.B

7th Grade Music – 117.36.c.5.A, 117.36.c.5.D, 117.36.c.6.B


**High School Fine Arts**

High School Music Level I – 117.60.c.5.A, 117.60.c.5.B, 117.60.c.5.D

High School Music Level II – 117.61.c.5.A, 117.61.c.5.B, 117.61.c.5.D


Lesson Title: The Problem with Opera

Subject: Math

Integrated Subjects: Fine Arts, Writing

Grade levels: Elementary School

Objective: Students will use music and opera vocabulary to write and solve story problems

Materials Needed: Paper and writing tools

Lesson: Review opera vocabulary in lesson one. Feel free to add additional musical terms and words to this activity.

Students can work individually or with a partner. Ask the student to create a well written story problem using the opera and music vocabulary. Problems should reflect the math unit or topic of study you are currently using in your classroom.

Example: An orchestra was getting ready to play for an opera. There were 7 flute players and twenty violin players. How many more violin players are there than flute players?

Students may exchange problems with one another and use their problem solving strategies to answer. They may also use drawings or objects to help solve the problems as well.

Assessment: Did students create problems that were solvable but also challenging? Did students use required vocabulary and create a story problem that made sense? Did students use appropriate math skills and strategies to solve the problems and show mastery of math concepts?

Differentiation/Extensions: Create visuals to accompany the story problems. Use the vocabulary in algebraic equations.

TEKS

Elementary School Math

K- 111.2.b.1, 111.2.b.3.B

1st – 111.3.b.1, 112.3.b.3.B

2nd – 111.4.b.1, 111.4.b.4.C, 111.4.b.4.D

3rd – 111.5.b.1, 111.5.b.4.A

4th – 111.6.b.1
5th – 111.7.b.1

*Teachers please note that you may apply TEKS that represent the specific math instruction that you wish for your students to use in this activity. For example, you may have your student create their story problems using multiplication in which case those TEKS would also apply to your lesson.
Lesson Title: Opera Graphs

Subject: Math

Integrated Subjects: Fine Arts, Writing

Grade levels: Elementary School, Middle School

Objective: Students will use music and opera vocabulary to create a graph about opera

Materials Needed: Paper and writing tools

Lesson:
Have students collect data from each other by asking survey questions about opera.
Examples and ideas could be:

Play a selection of songs and create a graph of which song students prefer.

Play a soprano, tenor, and base aria and ask students which one they liked the best.

After attending a performance, create a graph of which character students liked the best.

Ask if students would be interested in seeing another opera or not in the future.

Feel free to create charts and graphs on other opera and musical topics. You may create these graphs as a whole group or have students conduct their own individual surveys.

Assessment: Students will be able to chart results and interpret them. Assess if they can count and compare answers. Were students able to interpret their graphs and tables correctly? Were they able to answer questions correctly based on the information graphed? Assess the aesthetic/visual look of the graph. Is it neat and organized? Is it visually pleasing?

Differentiation/Extensions: Create a more detailed class survey about opera. Have students use computers and available technology to create online charts and graphs.

TEKS

Elementary School Math

K-111.2.b.8

1st – 111.3.b.8

2nd – 111.4.b.10

3rd – 111.5.b.1.D, 111.5.b.1.E, 111.5.b.8
4th – 111.6.b.1.D, 111.6.b.1.E
5th – 111.7.b.1.D, 111.7.b.1.E

**Middle School Math**

7th – 111.27.b.1.A, 111.27.b.1.D, 111.25.b.1.E
8th – 111.28.b.1.A, 111.28.b.1.D, 111.28.b.1.E
Lesson Title: Cornstarch Opera

Subject: Science

Integrated Subjects: Fine arts

Grade levels: Elementary School, Middle School

Objective: Learn the different ranges of opera singers and how different sounds and timbres of music create different sound waves

Materials needed: bowl, cornstarch, water, measuring cups, saran wrap, food coloring, and recordings of different opera voices – soprano, tenor, bass (Handel’s Messiah is ideal for this exercise because the music is familiar and the parts are easily identifiable. Although it is an oratorio and not an opera, the style of singing is the same and appropriate for this lesson), stereo or device with a speaker to play music (iPod, phone, etc…)

Lesson: Mix 1 ½ cup cornstarch with one cup of water in the bowl. You may line the bowl with saran wrap so you won’t have to wash it afterwards. Add food coloring if you desire. You can create four separate mixtures in four separate bowls if you wish and label each one with a voice part – soprano, alto, tenor, and bass.

After you have your mixture complete you can do either of the following:

1. Cover a concave stereo speaker with saran wrap to protect it. Pour the mixture into the saran wrap and play opera music that exhibits one of the four voice parts. As the sound goes through the speaker, the cornstarch mixture will begin to move with the music. Repeat this process playing each vocal part and have the students make observations about the cornstarch mixture as each part is played. Ask the students to identify the voice that is singing as soprano, alto, tenor, or bass.

2. Hold a stereo or music playing device up to the cornstarch mixture (be careful not to drop it). Play the music as instructed in number 1 and have the students record their observations.

Ask students questions and have them record their answers and observations in their science journals. Depending on grade level and writing ability, students may draw or describe their observations. Make sure that they include the words soprano, alto, tenor, and bass when recording their observations.

What happened to the cornstarch with the soprano voice was played?
What happened to the cornstarch with the alto voice was played?
What happened to the cornstarch with the tenor voice was played?
What happened to the cornstarch with the bass voice was played?

Did the cornstarch react differently to slow and fast music?
**Assessment:** Give a quiz to students where they identify the various vocal parts. Play a few seconds of an operatic selection and have students write or verbalize the answer.

**Differentiations/Extensions:** Have students experiment with other types of music and record their findings. Use video technology to film and narrate this experiment.

**TEKS**

**Elementary School Science**

K- 112.11.b.2.B, 112.11.b.2.D, 112.11.b.2.E, 112.11.b.6.A, 112.11.b.6.D


4th – 112.15.b.2.A, 112.15.b.2.B, 112.15.b.2.D, 112.15.b.2.F, 112.15.b.3.A, 112.15.b.5.A,
112.15.b.5.C, 112.14.b.6.A


**Middle School Science**


7th – 112.19.b.2

8th - 112.20.b.2, 112.20.b.6.A
Lesson Title: Opera Sense

Subject: Science

Integrated Subjects: Fine Arts, English Language Arts

Grade levels: Elementary School

Objective: Students will identify which senses are used to observe and participate as an audience member at an opera performance and what senses are used by performers to execute a show

Materials Needed: Writing tools, Chart paper

Lesson: Use chart paper and list or draw a picture representing the five senses. Have students list and share how they used each sense during the performance. Ask more specific questions, for example, what colors were the costumes of the different characters and how seeing set changes helped the story progress.

Repeat this same activity but this time pose the question, “How did the singers use their five senses to perform the show?”

<table>
<thead>
<tr>
<th>Sight</th>
<th>Hearing</th>
<th>Taste</th>
<th>Smell</th>
<th>Touch</th>
</tr>
</thead>
</table>

Assessment: Did students accurately identify how the five senses were used throughout the performance? Were they able to distinguish the difference between being an audience member vs. being a performer?

Differentiation/Extensions: Have students witness another small performance in class and have them do so blindfolded or with earplugs. How did this affect their ability to understand what was happening?

TEKS

Elementary School Science

K- 112.11.b.2.D, 112.11.b.4.B, 112.11.b.6.A

1st – 112.12.b.2.D

2nd – 112.13.b.2.D

3rd – 112.14.b.2.C
4th – 112.15.b.2.C

5th – 112.16.b.2.C
Lesson Title: Vocal Cords

Subject: Science

Integrated Subjects: Fine Arts

Grade levels: High School

Objective: Learn and discuss the biological changes in vocal cords as related to human growth and development and learn what contributes to different vocal sounds and ranges as a person gets older. When does a person’s voice reach full maturity? What types of vocal exercises help to elongate/change the structure or physical characteristics of the vocal cords?

Materials Needed: Rubber bands of different sizes and thicknesses, plastic containers or large plastic cups, pictures or videos of vocal chords and human throat

Lesson:

Explain to the students where the vocal cords are located in the throat and that they are necessary for voice production. As air passes through the throat and cords, the cords vibrate, creating sound. Students can experiment feeling the various vibrations in their throat by placing the fingers gently on the throat while making different sounds.

Vocal cords are brought together when higher sounds are made. Vocalist train by making different sounds and noises so the vocal cords will stretch, be brought together, and separate. As a person grows and develops, the vocal cords constantly change. A person’s vocal cords are fully developed at age ___. Discuss how these changes are different between boys and girls and how even as adults, there are slight differences that allow each person to have his or her own distinct sound. Playing a clip of the Vienna Boys Choir will provide a good example of an operatic sound produced by children. This can be compared to sounds produced by grown adults. Another way to do this to engage students would be to use popular music of young pop stars. Compare and contrast how the singer sounded at age 13-14 with age 18-19.

Show video demonstrating how vocal cords move and work as a person sings.

Use empty plastic containers or plastic cups that you can place rubber bands around. Try using rubber bands or different thicknesses and lengths. As the band is plucked over the open space of the container or cup, it should produce a sound. The tighter the band the higher the sound will be. Students can record the data they collect with different rubber bands on a chart or if possible, use computer and microphone technology to record the sounds of the plucked rubber bands and see the sound waves they produce. Compare and contrast the information.

Assessment: Did students follow directions in implementing the experiment? Did they apply the scientific method? Did they accurately record their data and draw correct conclusions? Were students able to demonstrate learning how the vocal cords work and change during stages of human development?
Differentiations/Extensions: Have students experiment with their own voices to see how low and high they can go. Compare the sounds of various stringed instruments such as a guitar, violin, and bass. Discuss the variations in the strings and how this influences sound production.

TEKS

Elementary School Science

K- 112.11.b.2, 112.11.b.4.A, 112.11.b.6.A, 112.11.b.6.D
4th – 112.15.b.2, 112.15.b.3.A, 112.15.b.4.A, 112.15.b.6.A, 112.15.b.6.D

Middle School Science

6th – 112.18.b.1, 112.18.b.2, 112.18.b.3, 112.18.b.4.A
8th – 112.20.b.1, 112.20.b.2, 112.20.b.3, 112.20.b.4.A

High School Science

High School Biology – 112.34.c.1, 112.34.c.2
Lesson Title: Opera Timeline

Subject: Fine Arts

Integrated Subjects: English Language Arts, Social Studies

Grade levels: Middle School, High School

Objective: Students will learn about the different periods of music and the styles of music associated with each time period. Students will also learn about how opera spread geographically over time.

Materials Needed: Paper and writing supplies to create time line, pictures from online of various composers, countries, and operas, recordings or videos of operas and classical music from the varying time periods

Lesson: Begin a class discussion about music and what the students like to listen to. Discuss how a lot of popular music that they listen to is extremely different than what was popular hundreds of years ago.

Opera became a popular musical development in the early to mid 1600’s. A very detailed timeline of opera history is found here:

http://www.oxfordmusiconline.com/public/page/operatimeline

And here:


Choose to focus on significant events in opera. They are listed here along with names of composers and operas that you can play for your students. As you and the students develop this timeline, take notes and participate in discussions about how the music has changed over time. Ask the students which style the like the best and why. Make sure you listen and preview any sound clips or videos you use so you can guide the discussion appropriately. Feel free to extend discussions into other historical events happening in each era or time period. Show how opera began in Europe and steadily became more popular through the region and eventually over the USA and even to the East in Russia. Students may even make observations about hairstyles and clothing too. Time lines can be as simple or as decorative as you would like them to be. Feel free to have students add drawings or pictures from magazines and online.

An interactive online musical timeline is found here at this link:

CLASSICAL MUSIC ERAS:

Renaissance – 1400 - 1600
Baroque – 1600 – 1750
Classical – 1750 – 1830
Romantic – 1830 – 1900
Modern – 1900 - Present

OPERA TIMELINE:

Early 1600’s
Jacopo Peri - Dafne, Claudio Monteverdi - Orfeo, The Coronation of Poppea

Late 1600’s
Henry Purcell - Dido and Aneas, The Fairy Queen

Early 1700’s
George Frederick Handel - Xerxes, Giulio Cesare,

Late 1700’s
Cristoph Gluck - Orfeo ed Euridice,

Early 1800’s
Beethoven - Fidelio
Rossini - The Italian Girl in Algiers, The Barber of Seville, La Cenerentola and others
Donizetti - Don Pasquale, La Fille du Regiment,
Bellini - La Sonambula and Norma

Mid 1800’s
Giuseppe Verdi – Aida, La Traviata, Rigoletto, and others
Bizet – Carmen

Late 1800’s
Wagner – Ring Cycle, Lohengrin, Tristan und Isolde
Gilbert and Sullivan – Pirates of Penvance,
Tchaikovsky – Eugene Onegin, Queen of Spades
Puccini – La Boheme, Madame Butterfly, Tosca, Turandot

Early 1900’s
Richard Strauss – Der Rosenkavalier
Dvorak – Rusalka
Gershwin – Porgy and Bess

Mid 1900’s
Benjamin Britten – Peter Grimes,

**Late 1900’s**
John Adams – Nixon in China, Dr Atomic
Phillip Glass - Satyagraha

**Assessment:** Were students able to create an accurate timeline with events and dates in the proper order? Was the timeline visually pleasing? Did the students include additional researched information in their timelines to make it more complete?

**Differentiations/Extensions:** Students can use computer technology to create timelines. They made add pictures, website links, and music to the timelines.

Have students make note of important historical events taking place during each of the musical time periods to include in their timelines.

**TEKS**

**Middle School Social Studies**


8th – 113.20.b.29.B, 113.20.b.30.D

**Middle School Fine Arts**

6th Grade Music – 117.33.c.5.A

7th Grade Music – 117.36.c.5.A

8th Grade Music – 117.39.c.5.A

**High School Social Studies**


**High School Fine Arts**

High School Music Level I – 117.60.c.5.A

High School Music Level II – 117.61.c.5.A

High School Music Level III – 117.62.c.5.A
Lesson Title: Opera Online

Grades: Middle School, High School

Subject: Technology, Fine Arts

Integrated subjects: Social Studies

Objective: Students will research opera and create a power point presentation to share information they find

Needed Materials:

Lesson: Students will research opera by participating in an online scavenger hunt to find information about opera. Students will compile their answers to create a power point presentation. You may use the questions and inquiries below or create your own.

Questions for scavenger hunt
What are the elements of opera? What is needed to perform an opera?

What are the 4 different voice ranges in opera?

Where did opera originate? What year?

What is considered the first opera? Who wrote it? Where was it performed?

Find an opera composer from each of the following musical eras: Baroque, Classical, Romantic, and 20th Century. Include the composer name, where they are from, date of birth and death, and an opera they composed.

List 2-3 world famous opera houses and their locations

List 4 famous opera singers – 2 female, 2 male, one of each must be deceased, include full name, nationality, date of birth and death, signature roles

What operas are the most performed throughout the world? List the names of the operas, the composers, and librettists.

Is there an opera company located near you? What? Where? What is the contact information you can share with others so they can see a performance?

Watch two videos of an opera performance (solo aria). List the performer, the piece being performed, the composer, and if you liked or disliked the song/performance.

Assessment: Students found accurate information and shared information in their own words in a logical and organized presentation.
**Differentiations and Extensions:** Add or delete questions for your students or create an online scavenger hunt for a famous opera or performer

**TEKS**

**High School Fine Arts**

High School Music Level I - 117.60.c.5.A, 117.60.c.5.B

High School Music Level II – 117.61.c.5.A, 117.61.c.5.B

High School Music Level III - 117.62.c.5.A, 117.62.c.5.B

High School Music Level IV – 117.63.c.5.A, 117.63.c.5.B

High School Theater Arts Level I – 117.64.c.4.A

High School Theater Arts Level II – 117.65.c.4.A

High School Theater Arts Level III – 117.66.c.4.A, 117.66.c.4.C

High School Theater Arts Level IV – 117.66.c.4.A, 117.66.c.4.C

**High School Technology**

Fundamentals of Computer Science – 126.32.c.3.A, 126.32.c.6.C

Web Communications – 126.46.c.1.A, 126.41.c.2.B, 126.41.c.3.A, 126.41.c.3.C
Lesson Title: Opera Politics

Grades: High School

Subject: Social Studies – American History, World Cultures,

Integrated subjects: Fine Arts, Language Arts

Objective: Students will learn about how modern day political and social events have been interpreted and performed on the operatic stage and how these performances help increase our understanding of the world and significant events.

Needed Materials: Recordings and/or video clips as well as books and articles related to the productions, composers, and performers listed below

Marian Anderson (Mid-century civil rights movement and history, Minorities in the arts)

Satyagraha – Philip Glass (Gandhi, India, South Africa, International Civil Rights Issues)

Dr. Atomic – John Adams (Development of the Atomic Bomb, Warfare, J.Robert Oppenheimer, WW II US/Japanese relations)

Nixon in China – John Adams (History of US/China relations and politics in the late 60’s – early 70’s, President Richard Nixon, Chairman Mao of China)

Lesson: As opera has evolved over time, compositions and productions have evolved to Contain Non-fiction historical themes and events. Opera has become a vehicle to educate and explore significant historical figures and events. Please select one or more of the following as it coincides with your curriculum.

1) Marian Anderson was the first African American Opera Singer to perform at The Metropolitan Opera. Ms. Anderson became a literal “voice” in the civil rights movement in The United States. Her representation at The Met opened the door for many other African American performers and other minorities.

Research and discuss as a class the following regarding Marian Anderson:

Ms. Anderson was a pioneer in the Civil Rights movement. What were the issues and what was the status of the Civil Rights movement in the 30’s and 40’s in The United States?

Research and discuss the history behind Ms. Anderson’s famous performance at The Lincoln Memorial in 1939.

How did Marian Anderson pave the way for minorities not only in the opera world, but in the arts world in general?
What other significant events did Marian Anderson participate in as a Civil Rights Leader? What were her personal achievements?

Have students research together or separately and discuss the information they find. Have students reflect in their journals or in other writings their feelings and discoveries about Marian Anderson and her contributions to the arts and American society.

Video footage of Ms. Anderson is found on YouTube Education and United Streaming.

2) Gandhi is perhaps one of the most famous and well known world leaders and icons who promoted human rights and peace in the early 20th century. American composer Phillip Glass, composed a modern opera about Gandhi titled Satyagraha.

Research and discuss as a class the following about Gandhi:

Research basic background information about Gandhi. Learn about his early years and the incidents that inspired him to change his outlook and life mission.

What were some of the significant life events that took place for Gandhi? Who were his supporters and who were his enemies?

Research some famous quotes and speeches of Gandhi and discuss why these are significant. What aspects of his philosophies do you agree or disagree with?

What does Satyagraha mean? Why do you believe Phillip Glass selected this as the title for his opera?

3) Dr J Robert Oppenheimer is the subject of John Adams’ opera, Dr. Atomic. Dr. Oppenheimer is known as the inventor of the Atomic Bomb. The opera delves into a perspective of Dr Oppenheimer being conflicted about his invention.

Research and discuss as a class the following about Dr. J Robert Oppenheimer:

Research the basic background of Dr. Oppenheimer. What is his educational background? What was his scientific research and how did he end up working with the government on developing the atomic bomb?

Dr. Oppenheimer loved poetry. Watch or listen to the clip/performance of “Batter My Heart” (written by John Donne) from the opera. Research interpretations of this poem. Why do you think Dr. Oppenheimer was conflicted about his work in relation to belief in a higher power?

When did the United States drop the first Atomic Bomb? What were the consequences of this action? What happened to Dr. Oppenheimer after the bomb was dropped?
Do you think Dr. Oppenheimer regretted his involvement in the development of the atomic bomb?

Why would John Adams select a person such as Dr. Oppenheimer and the topic of the development of the atomic bomb for and opera? What do you think the message is that he wants to get across to the audience? What do you think other unconventional topics would be for future operas?

4) President Richard Nixon made a historic visit to China in the 1960’s. This is the subject for another opera composed by John Adams.

Research and discuss as a class the following about Nixon in China:

Why was this visit a big deal for American/Chinese foreign relations? What was the political and economic status of China at the time? What was the purpose of the visit? What was the outcome?

Compare and contrast the forms of government and economic state of the China and the United States in the 1960’s. What is it today?

Political leaders engage in various meetings constantly. Why do you think John Adams selected this meeting as a subject for an opera?

Do some side research into Chinese Opera. How do the artistic elements and sounds compare with Western style music and operatic performances?

**Assessment:** Were students able to conduct research using appropriate materials and was the information gathered accurate? What new understandings did students come away with regarding music and opera being used as a vehicle to discuss politics and controversy? Were students able to make inferences and logical conclusions based on their research?

**Differentiations/Extensions:** Adjust intensity and level of discussion based on grade level and student understanding.

**TEKS**

**High School United States History Studies**

*Relevant to studying Marian Anderson

**High School World History Studies**

*Relevant to studying Dr. Atomic
*Relevant to studying Nixon in China

*Relevant to studying Satyagraha

High School World Geography

*Relevant to studying Nixon in China

*Relevant to studying Satyagraha

High School United States Government

113.44.c.2.B, 113.44.c.7.F, 113.44.c.13.B, 113.44.c.13.C, 113.44.c.15, 113.44.c.20.A
*Relevant to studying Marian Anderson

113.44.c.19.A, 113.44.c.20.A
*Relevant to studying Dr.Atomic

113.44.c.4.B, 113.44.c.6.A, 113.44.c.15.C, 113.44.c.20.A
*Relevant to studying Nixon in China
Lesson Title: Fan Page

Grades: Middle School, High School

Subject: Social Studies

Integrated subjects: Fine Arts, Technology

Objective: Students will conduct research and use modern technology to develop a webpage related to opera

Needed Materials: computers, writing materials, art materials such as poster board, glue, and scissors

Lesson: Social networking sites are hugely popular and are utilized by individuals and organizations to promote themselves and their products. Discuss how a business or organization would use a webpage or social networking site to share information and the information you would expect to see on such a site. Look at appropriate examples. Ask students to create a web page or social network page (for example facebook) for opera. The page may be created for opera in general, a specific opera, a singer, or composer. Information should be factual and accurate with appropriate documentation of references used. Encourage students to be creative in their use of visuals and layout.

Assessment: Students used accurate information and documented appropriately. They followed criteria outlined by the teacher with regard to content and also demonstrated creativity.

Differentiations and Extensions: Have students create an interactive power point or smart board game about opera.

TEKS

Middle School Social Studies


8th – 113.20.b.26, 113.20.b.29.C, 113.20.b.30

High School Social Studies

Lesson Title: Operanomics

Subject: Social Studies, Economics,

Integrated Subjects: Language Arts, Fine Arts

Grade levels: High School

Objective: Students will be able to understand how economic shifts influence the arts community by researching how the recent national economic recession influenced art funding and accessibility.

Materials Needed: Computer and internet access, library access, Writing materials

Lesson: During the recent economic recession, numerous opera companies, symphonies, dance troupes, and other art organizations suffered cutbacks, layoffs, and in some cases, went out of business. Recently, Houston Grand Opera was one of the few that has continued to come out as a profitable organization despite other large arts companies accruing debt to stay afloat or failing to make money.

Allow students to research the impact of the recession on the arts in Houston and across the country. Consider the following questions and thoughts to help guide them in their research:

What are the characteristics of a recession?

What is the typical impact a recession has on the economy in general?

How does a recession affect the arts community?

What areas of the country suffered the least/most during the recent recession with regard to fine arts organizations and funding?

What economic practices allowed these areas to be more successful than others in maintaining a strong arts community?

What types of financial decisions would allow an arts organization to fail?

What types of financial decisions would allow an arts organization to succeed?

How can arts organizations be better prepared for future recessions or an economic crisis?

What solutions can you offer them or what ideas do you have to make sure they are prepared financially for unexpected circumstances?

How could a company such as Houston Grand Opera save money and cut costs?

How could a company such as Houston Grand Opera increase profits?
What impact does an economic crisis have with regard to private donors contributing to the arts?

What impact does an economic crisis have with regard to ticket sales?

What impact does an economic crisis have with regard to the quality of performances they provide on the stage and for the community?

Feel free to come up with additional questions. Assign specific questions to individual students or have them work in small groups. Have a group discussion about the various findings and ideas that the students have.

**Assessment:** Did students use proper research skills and strategies? Did written materials follow proper writing and grammar conventions? Did students gain a greater understanding of how the arts community is affected by the economy?

**Differentiations and Extensions:**
Invite a local economist or member of the arts community to discuss the questions and issues above with students.

**TEKS:**

**High School Social Studies**