



San Francisco Opera's Donizetti's *LUCIA DI LAMMERMOOR* Curriculum Connections

California Content Standards
Kindergarten through Grade 12

MATHEMATICS

ATTRIBUTES

Comparisons in Lucia di Lammermoor .

Sorting and Classifying: What belongs, what does not belong, and why. Ex. Enrico and Lucia are Ashtons, while Edgardo is a member of the Ravenswood family. Alisa and Normanno serve Lucia and Enrico.

MEASUREMENT

Lucia di Lammermoor's Use of Standard Units of Measurement in Story & Set Design.

2D & 3D Dimensions: Area, Perimeter, Volume, Scale, Proportion, Ratio.

Weight: Physical, Metaphorical, Balance.

Time: Passage of time (real & theatrical time), times of day (morning, afternoon and night; yesterday, today, tomorrow; time of everyday events such as dinner & bed time), estimation, reading time, age of characters.

Research Donizetti's and the librettists' salaries for *Lucia di Lammermoor*. What is the proportion of one to another?

What currency was used during Donizetti's day? How much was it worth compared to today's money?

If you were Enrico, how much would it have cost to run your household? Create a budget for his household, taking into account all expenses.

Count the number of people who need to be paid when putting on an opera; use cast and company listings in the program to calculate.

Estimate how many people are in large ensemble scenes. Taking into account all the people on stage, how much would such a scene cost, in Donizetti's time and now?

Measure distances between places mentioned in the opera. Use map scales to convert inches to miles.

Measure the acreage of Scotland.

How far is Scotland from France?

What's the square footage of a Scottish castle?

Measure how much fabric would have been used in a wedding gown. Try to create your own, or draw a diagram.

GEOMETRY

As found in Lucia di Lammermoor's character, costume & set design.

Identification of Shapes, Repetition & Pattern, Rhythm & Symmetry.

Planes (Square, Rectangle, Triangle, Circle) & 3D (Cube, Pyramid, Sphere). Positive & Negative Space, Interior & Exterior Space.

Calculate area of opera stages today vs. opera stages during Donizetti's time.

Build a scale model of Enrico's castle. Take proportions into account. Calculate area of Enrico's castle.

NUMBER SENSE

Counting using the production elements and music of *Lucia di Lammermoor*.

Formulas & calculations: Addition, subtraction, multiplication, division.

More, less, or same as.

Concept of zero (absences, disappearances. Ex. rests/silence in music.

Ordering & sequencing.

Recognizing and creating numerical patterns. Ex. beats, ABA pattern in music.

Survey taking: tallying and graphing.

Predictions.

ACTIVITIES

Design and play a board game based on the opera.

Research remonetizing formula; how do economists determine how much money was worth then vs. now?

Create dress patterns for *Lucia di Lammermoor*.

Calculate how much a night at the opera would cost.

What other kinds of businesses do opera patrons support?

What are the statistics on arts organizations stimulating the local economy?

What is the average price of an opera ticket?

How does it compare to the price of other kinds of performances?

How many seats do you need to fill to pay for the cost of producing an opera?

What's the total revenue compared to the cost of producing it?