



San Francisco Opera's Verdi's *DON CARLO*

Curriculum Connections

California Content Standards
Kindergarten through Grade 12

MATHEMATICS

ATTRIBUTES

Comparisons in Don Carlo

Sorting and Classifying: What characters belong together, which don't, and why.

MEASUREMENT

Don Carlo'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.

Explore the math of the Spanish Inquisition, Use the Henningsen-Contreras statistics for the period 1540–1700
https://en.wikipedia.org/wiki/Spanish_Inquisition#Henningsen-Contreras_statistics_for_the_period_1540.E2.80.931700

Compare with the United Nations' statistics for international migration today.

<http://www.un.org/en/development/desa/population/migration/data/estimates2/estimates15.shtml>

Estimate how many people are in large ensemble scenes. 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.

Create a budget for a production of the opera. Students are responsible for accomplishing production and staying within budget.

Create timelines for Verdi's life, what's happening in other places at the same time.

GEOMETRY

As found Don Carlo'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.

Build a scale model of a set for *Don Carlo*. What materials and what quantities of them would you need to build it?

Create analogies between polygons and different ensembles in the opera (i.e. a trio is a triangle, a quintet is a pentagon).

NUMBER SENSE

Counting using the production elements and music of Don Carlo.

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.

How many people are in an opera chorus? How much space do you need for them onstage?

How much money would a royal family have in the time the opera is set? Compare to today.

ACTIVITIES

Design and play a board game based on *Don Carlo*.

Design a deck of trading cards based on the characters of *Don Carlo*.

Research remonetizing formula; how do economists determine how much money was worth then vs. now? What is the value of the money Don Carlo has in today's money?

Create costume patterns for *Don Carlo*. Use yourself as a size model and design the patterns to fit you.

Build a scale model of a set for *Don Carlo*. What, and what quantities of, materials would you need to build it?