



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

California Content Standards
Kindergarten through Grade 12

SCIENCE

The principals of science used in Don Carlo.

THE FIVE SENSES:

Sight, sound, touch, taste, and smell.

What are senses involved in experiencing opera?

How do senses develop and decline as you get older?

The loss of what sense would most diminish experience of opera.

PARTS OF THE BODY:

Identification of body parts important to performing. Ex. Diaphragm, larynx, throat, mouth, etc.

Identification of body parts associated with hearing music, how ears work.

Identification of body parts associated with viewing opera, how eyes work.

Examine the science of men and women and psychological and physical differences.

LIFE SCIENCE

Explore the genetics of Don Carlo's family tree. Familial traits, In breeding and the "Habsburg Jaw"

<http://scienceblogs.com/gnxp/2009/04/14/inbreeding-the-downfall-of-the/>

DNA Lab - Monocultures vs. biodiversity (benefits of diverse gene pool in terms of survival)

How does the body react in times of stress like those that occur in the opera?

What happens to your brain when you're in love or when you're angry? How is your body affected?

THE ELEMENTS

Fire, Water, Earth, Metal, Air, Wood.

Weather.

Sun, Moon, Stars.

PHYSICS

Sound: Voice, Instruments, Acoustics, Amplification, Recording.

Concepts of Gravity, Time & Space.

Science and the Spanish Inquisition; religion and science; emotion and science; bias/belief of right

Learn about the Trial of Galileo Galilei (1633) <http://law2.umkc.edu/faculty/projects/ftrials/galileo/galileo.html>

ACTIVITIES

Create an illustrated version of Don Carlo's family tree. https://en.m.wikipedia.org/wiki/Philip_II_of_Spain#Family

Explore the characters' psychological motivations and the neuroscience of perception and decision-making.

What is DNA? Explore DNA with DNA Interactive. <http://www.dnai.org/>

Learn genetics. Explore the Genetic Science Learning Center <http://learn.genetics.utah.edu/>

Learn more about monocultures, and the importance of biodiversity.

Find the DNA in a Banana. <http://www.scientificamerican.com/article/find-the-dna-in-a-banana-bring-science-home/>