



San Francisco Opera's Rossini's *CINDERELLA* Curriculum Connections

California Content Standards
Kindergarten through Grade 12

SCIENCE

The principals of science used in Cinderella.

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.

The science of visual perception – disguise, mistaken identity, recognition

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.

How do you care for your vocal cords?

LIFE SCIENCE

Learn more about the life cycle of a rat. How can you tell the difference between a mouse and a rat?

Rats and people co-exist all over the world. Explore the complex relationship between humans and rats.

Why are mice and rats used in science experiments? What kinds of scientific studies have been done with rats?
Explore both sides of the issue of using of animals for experimentation.

THE ELEMENTS

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

Weather.

Sun, Moon, Stars.

What is fire? Explore the chemistry of fire.

What are cinders? Learn more about the coal-burning process.

Learn more about pyroclastic rocks or pyroclastics.

Explore the alternatives to burning coal that to generate clean energy that benefits the environment.

What is fermentation? How is fermentation used in food-making process? (cheese & wine)

The Baron says that wine cannot be adulterated (to make impure by adding extraneous, improper or inferior ingredients) for 15 years. What is the effect of mixing wine with water? How is the alcohol content in wine determined? How is blood alcohol concentration determined?

PHYSICS

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

Concepts of Gravity, Time & Space.

Chaos theory: how to organize chaos? It can be done in science and in art. How does Rossini organize chaos?

What support needs to be in place for a stage to hold the amount of people in the opera's crowd scenes?

The physics of transportation (energy and power; friction; momentum)

ACTIVITIES

Research the sources of light during Rossini's time. How would a theater have been illuminated?

List references to nature in *Cinderella*.

Explore the characters' psychological motivations.

Make your own thunderstorm.