



## San Francisco Opera's Rossini's *THE BARBER OF SEVILLE*

### Curriculum Connections

California Content Standards  
Kindergarten through Grade 12

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#### SCIENCE

*The principals of science used in The Barber of Seville.*

##### 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.

Manuel García, the first person to sing Count Almaviva, also created the laryngeal mirror; what is a laryngeal mirror? What is it for? How does it work?

How do you care for your vocal cords?

##### LIFE SCIENCE

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

List the ailments listed in the opera.

Tobacco, snuff and alcohol are all mentioned in the opera; how do they affect the human body?

What is mob mentality? How does it work in this opera?

Dr. Bartolo and Figaro are both doctors, of a kind; how has the practice of medicine changed since the opera was written?

## THE ELEMENTS

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

Weather.

Sun, Moon, Stars.

There is a thunderstorm in the opera; why do thunderstorms happen? How does lightning work?

Is there a specific kind of thunderstorm that happens in Seville? What time of year do thunderstorms usually happen there?

How does the music express the thunderstorm? How would you portray a thunderstorm on stage?

## 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?

## ACTIVITIES

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

List references to nature in *The Barber of Seville*.

Explore the characters' psychological motivations.

Explore how spinning works. What is spinning used for? What has replaced spinning wheels today? What kind of fabrics can be made by spinning?

What kind of animals spin fibers?

Research the development of spinning technology and how weaving is related to the development of computers.