

# Change through Time

**Grade Level:** Middle and High School

**Concept/Strand:** The social, cultural, and technological changes during the 20<sup>th</sup> century, impacted the life and work of Dr. E. Lucy Braun in both positive and negative ways.

**Subjects:** Science, English Language Arts, Social Studies, American History, Geography, Contemporary World Issues, Art, Theater

**Objectives:**

Students will be able to:

- Use the documentary to interpret, analyze and summarize information,
- Determine and illustrate changes in land use over time,
- Explain and demonstrate what life was like in the early 20<sup>th</sup> century,
- Document resource extraction in the Appalachians and explain the positive and negative impacts,
- Become acquainted with the impact of women scientists in the U.S. prior to and during Dr. Braun's time.

**Teacher's Notes:**

- **Aerial photographs** may be obtained through your local Soil and Water Conservation District.
- **Resource extraction** is the removal of natural resources for human consumption. In the Appalachians there has been a long history of timbering, coal mining, oil and gas extraction, and harvesting of medicinal plants.

**Background:** During the span of Dr. E. Lucy Braun's life and career, there were massive changes in society, technology and the environment. Attitudes towards women began to change, new forms of transportation emerged and the extraction of resources accelerated at a frantic pace. Some of these changes were beneficial to Dr. Braun in her day-to-day life and work, while others actually destroyed the very thing she had devoted her life to.

**Class Discussion:**

The 20<sup>th</sup> century was filled with rapid changes. Many of these changes can be seen as the film progresses. Instead of all students taking notes on all the changes seen in the film, it is suggested that topics be assigned to small groups of students. Those groups can then focus on their particular topic when taking notes. Suggested topics: economy, technology, industry, transportation, communication, photography, accepted forms of dress, attitudes towards women, political activism, education and development of conservation organizations. Student groups should then summarize their notes so they can then share their documentation with the rest of the class.

**Research Topics:**

1. Using **aerial photographs** and satellite images (i.e. Google Earth), document the change over time in your area. Consider things like development, forest cover change, and changes in agricultural land use.
2. Explore your area during the early 20<sup>th</sup> century. Find out about things like the main industries, the common modes of transportation and/or population size. Did your area have electricity, sewer systems, or other community improvements? What did people do for entertainment?
3. Research the history of **resource extraction** in the Appalachians.
4. Research the life and scientific contributions of one of the following women: Jane Colden, Lucy Say, Susan Fenimore Cooper, Mara Martin, Graceanna Lewis, Mary Treat, Ellen Quillen, Katherine Dooris Sharp, Eliza Griscom Sullivant, Ynes Mexia, Elizabeth Gertrude Knight Britton, Anna Comstock, Annie Trumbull Slosson, Margaret Morse Nice or Rosalie Edge.



## Student Projects:

1. Create a visual representation of the changes discovered during Research Topic #1.
2. In conjunction with Research Topic #2, create a mural, diorama or digital representation of a typical scene from your area during the early 20<sup>th</sup> century.
3. Develop a chart showing the positive and negative impacts of resource extraction found when researching Topic #3.
4. In conjunction with Research Topic #4, create a first-person interpretive reenactment of the woman studied. Include period costuming and appropriate props.
4. Construct a timeline of the person profiled in Research Topic #4.

## Resources:

### Books:

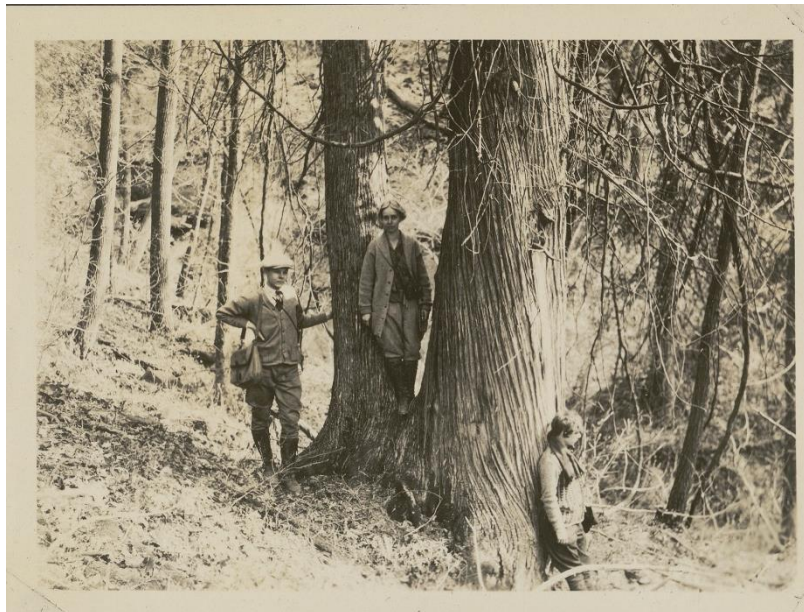
*Woman Botanists of Ohio Born Before 1900* by Ronald L. Stuckey

*Rosalie Edge, Hawk of Mercy, The Activist who Saved Nature from the Conservationists*, by Dyana Z. Furmansky

*Women in the Field, America's Pioneering Women Naturalists* by Marcia Myers Bonta

*American Women Afield, Writings by Pioneering Women Naturalists* by Marcia Myers Bonta

*American Women of Science Since 1900* by Tiffany Wayne



*E. Lucy Braun (center) and others in Adams County, Ohio in the early 20th Century.  
Photo courtesy of Cincinnati Museum Center*