

-WOMEN'S HISTORY MONTH-

WOMEN AND THE SCIENCES

ARKANSAS WOMEN IN A MALE-DOMINATED FIELD

Children are told that they can grow up to be anything they want to be. Traditionally, however, the field of science was predominantly male; women working in the field were a small minority. For that reason, the important contributions of women in science have often been overlooked.

To put women back in history, teachers and their students are encouraged to use the following information about the five women Arkansans who made significant contributions to the sciences. The information contains links to media or text entries in the *Encyclopedia of Arkansas* (EOA), Butler Center Lesson Plans, and audio clips from AV/AR Collection. The occupational information is from the *Occupational Outlook Handbook, 2010-11 Edition* created by the Bureau of Labor Statistics, part of the United States Department of Labor.

<http://www.bls.gov/oco/>

Lesson Plans - Two featured Butler Center Lesson Plans for Women's History Month are:

- ❖ [Arkansas, A Feminine Perspective](#) – a general lesson on women in Arkansas history
- ❖ [Votes for Women](#) – a lesson about the women's suffrage movement

Joycelyn Elders (1933–)

Pediatric Endocrinologist; Arkansas Department of Health Director; U.S. Surgeon General

Elders was director of the Arkansas Department of Health and the U.S. surgeon general in the administration of President Bill Clinton.

- ❖ [EOA entry](#); [EOA image](#); [EOA image](#)
- ❖ Bureau of Labor Statistics – [Physicians and Surgeons](#); [Medical Scientists](#)
- ❖ Butler Center Lesson Plan – [“Joycelyn Elders: From Sharecropper's Daughter to Surgeon General of the United States of America”](#)
- ❖ AV/AR Audio Video Collection – [Full-length audio interview](#) with Joycelyn Elders; [List of audio clips](#) averaging two minutes from interview with Joycelyn Elders



Virginia Anne Rice Williams (1919–1970)

Biochemist

As a biochemist, Williams helped develop more nutritious grains through her pioneering studies of rice, a major Arkansas crop. She conducted important research on the B-vitamin content of rice, on ways to keep rice from turning rancid in storage, and on the vitamin fortification of rice. (Photo not available)

- ❖ [EOA entry](#)
- ❖ Bureau of Labor Statistics – [Biological Scientists](#)

Butler Center Lesson Plan – [“How Many Grains of Rice?”](#) (Lesson plan uses two children’s books, *One Grain of Rice* by Demi and *Everybody Cooks Rice* by Nora Dooley.)

Marian Breland Bailey (1920–2001)

Psychologist; Animal Behavioral Scientist



Bailey was a pioneer in the field of animal behavior. She and her first husband, Keller Breland, were the first to use operant conditioning technology for commercial purposes. From their Hot Springs farm, the Brelands exported the new technology all over the world.

- ❖ [EOA entry](#); [EOA image](#)
- ❖ Bureau of Labor Statistics – [Psychologist](#); [Veterinarian](#)

Florence Clyde Chandler (1901–1984)

Plant Geneticist

Chandler was a plant geneticist with a broad background in tree-breeding and the induction of polyploidy (the quality of having one or more extra sets of chromosomes) in flowering plants. During World War II, she worked at the Guatemalan experimental station as a breeder of cinchona (a type of evergreen tree), where she furthered the successful development of a derivative for quinine, a malaria remedy.

- ❖ [EOA entry](#)
- ❖ Bureau of Labor Statistics – [Biological Scientists](#)
- ❖ Butler Center Lesson Plan – [“Boom and Bust in the Ozark Forests”](#)
- ❖ Butler Center Lesson Plan – [“Timber: Living and Working in an Arkansas Forest”](#)

Margaret Pittman (1902–1995)

Microbiologist

Pittman was known worldwide for her pioneering research into the microbiology and immunology of infectious diseases. Her work in developing a vaccine for whooping cough remains the scientific basis (with later improvements) for protecting the children of Arkansas and the world from this potentially deadly disease.

- ❖ [EOA entry](#); [EOA image](#)
- ❖ Bureau of Labor Statistics – [Biological Scientists](#)
- ❖ Butler Center Lesson Plan – [“Arkansas Flu Epidemic of 1918”](#)

