

Videos

African Americans in Science, Mathematics, Medicine and Invention

Contributions of Africans and African Americans are explored with imaginative, hands-on puzzles and activities in a time travel adventure that explores history of African and African Americans’ contributions in science, mathematics, medicine, and invention.

The Changing Face of Science in America

This series presents biographical portraits of 20 contemporary African American, Latino and Native American scientists and engineers who are making advances in many scientific disciplines.

George Washington Carver.

A video explanation of how Carver, born of slave parents, became a scholar and researcher whose work revolutionized agriculture in the post-Civil War South and whose accomplishments demonstrated that color barriers have no place in science or any aspect of American life.

Inventing the Future: African-American Contributions to Scientific Discovery and Invention.

This video features highlights from the careers of several African-American scientists and inventors who have made valuable contributions to science and technology in the United States.

Playtime is Science: An Equity-Based Parent/Child Science Program.

Created to give all children regardless of gender, race, national origin, disability, or level of family income access to inquiry-based science, this program focuses on physical science activities that help children develop higher-order thinking skills, using inexpensive materials common to most homes and classrooms. Three videos are included along with a teachers guide.

Tracing the Path: African American Contributions to Chemistry in the Life Sciences.

This video traces scientific contributions by pre-colonial Africans in Africa, African Americans during the late 1800s to mid-1900s in the United States, and modern African Americans in the field of chemistry.

Women In Science

This live-action video program helps both male and female students understand the problems and the potentials of women working in fields of science and technology today. Part One presents a brief history of women in science of the past. and Part Two features outstanding women of today addressing what it is to be a scientist (or a technician using science) today.

General Resources

Careers in Science and Technology

Grades 9-12

This book serves as a reference for youth as they make decisions on their career goals and education. Descriptions of scientific and engineering fields and associated requirements and guidance in college curriculum and career selection are included.

Celebrating Women in Mathematics and Science

Grades 6-12

Cooney, Miriam P.

Biographies of 22 women scientists and mathematicians from ancient times to the current day are featured.

Multiculturalism in Mathematics, Science, and Technology: Readings and Activities

Grades 9-12

Designed to help infuse multicultural education into science and mathematics classrooms, this book provides short essays on individuals and topics in the areas of science, math, and technology, and includes useful classroom activities and worksheets.

Multicultural Science and Math Connections

Beatrice Lumpkin and Dorothy Strong.

Grades 9-12

Students explore and practice discoveries from other civilizations in this book highlighting contributions of fourteen cultures that are under represented in traditional curricula.

The Power Project

Grades 4-8

This book is to be used as part of an Operation SMART program, together with Spinnerets and Know-How. It offers girls positive experiences in science, including hands-on activities, talking and sharing with one another, and planning for their futures.

Science for All Cultures.

Shelly Johnson Carey

Grades 9-12

These articles authored by individuals of culturally diverse background present several points that provide the reader with a basic understanding of multicultural science education and suggestions for using a multicultural approach as an instructional process.

Teacher Resources

Building Ethnic Awareness in a Science Classroom

Jacqueline M. Stone

Examines the benefits and goals of multicultural education and suggests multi-ethnic activities for the classroom.

Computer Equity in Math and Science: A Trainer’s Workshop Guide

Jo Sanders and Mary McGinnis

The goal of this workshop is to give math and science teachers and administrators special computer equity strategies for overcoming girls’ computer avoidance.

Encourage Every Girl in Science, Math, and Relevant Technology

The purpose of Operation SMART is to empower young people who have traditionally been left out of math and science. It uses hands-on, participatory activities in out-of-school settings to stimulate girls’ interest in science, math, and technology. (To be used along with The Power Project.)

Minds on Science: Middle and Secondary School Methods

Jack Hassard

This book engages the reader through the use of minds on/hands on experiences. A variety of methods are presented and evaluated.

Science Equals Success.

Catherine Conwell

Contains over thirty discovery oriented science activities designed especially for girls and students of color. Aimed at grades 4-9 they deal with problem solving, cooperative learning, special skills, and career awareness.

Nurturing At-Risk Youth in Math and Science: Curriculum and Teaching Considerations

Randolf Tobias,

This book features strategies for math and science teachers, teacher educators, and administrators on how to nurture at-risk youth in subject areas in which they have traditionally avoided. Positive creative programs presently in existence are described.

Lifting the Barriers: 600 Strategies that Really Work to Increase Girls Participation in Science, Mathematics, and Computers

Jo Sanders

Based on the experiences of two hundred K-12 educators from every state in the country, this book contains hundreds of tested strategies that are teacher-friendly as well as successful.

Math and Science for the Coed Classroom

Patricia B. Campbell and Jennifer N. Storo

Contains 4 pamphlets: “Girls are...Boys are...: Myths, Stereo-

types, and Gender Differences”, “Why me? Why My Classroom?” “Equity in Coed Math and Science Classes” “Whose Responsibility Is It? The Role of Administrators and Counselors, and Teacher Strategies That Work for Girls and Boys.”

Redirecting Science Education: Reform for a Culturally Diverse Classroom

Julia V. Clark

This resource shows how to develop strategies to involve every student in a science curriculum and discusses ways to make teaching more relevant for a culturally and racially diverse classroom.

Playtime is Science: Implementing a Parent/Child Activity Program

Barbara Sprung, Linda Colon, Merle Froschl, and Sandra Jenoure

This activity guide helps parents and teachers go beyond the classroom and incorporate science and scientific thought into children’s daily activities. Using household items, the program develops problem solving skills, creative thinking abilities, decision making powers, and visual spatial skills crucial to science success.

Science In the Multicultural Classroom: A Guide to Teaching and Learning.

Barba, Robertta H.

Teaching practices that help the instructor include a diverse population of learners in the science curriculum.

Latino Women of Science.

Bernstein, B., A. Walker, and L. Zierdt-Warshaw.

Designed to supplement middle school curriculum, this resource covers the lives and scientific contributions of women who overcame poverty, prejudice, and other obstacles to make their marks in scientific fields.

Stargazers: Women in Science and High Technology Careers.

This resource, designed for girls and young women to use alone, in a class, or with a group of friends, introduces aspects of pursuing a career in science and high technology fields. It also addresses basic steps of career planning and includes quizzes and worksheets for students to complete.

Multicultural Women of Science.

Bernstein, B., A. Walker, and L. Zierdt-Warshaw.

This book documents and describes the work of 37 women sci-

entists from a cross-section of times, places, and cultures, and the major impact women have had on all scientific areas.

Science Team: Teacher's Manual.

Mastny, Aleta You.

This resource was created to increase elementary teachers' skills using environmental science content, hands-on experiments, and cooperative learning classroom management techniques.

Software

Telling Our Stories: Women in Science.

This Macintosh software package highlights the lives and work of pioneering women in science.

Making Schools Work For Every Child.

Eisenhower National Clearinghouse for Mathematics and Science Education:

A resource for those concerned about educational equity related to K-12 math and science education.

Posters

Young Girl Discovering Science Jobs

A picture of a young girl reading a book encompassed by dozens of job titles

Women in Science

Photos of Chien-Shiung Wu, Barbara McClintock, and Grace Hopper.

Hispanic Americans in the Sciences Set

Features sketches and biographies of prominent Hispanics in the science field.

NASA Superstars of Science

Many well-known Black scientists, engineers, psychologists, and physicians are featured.

Women in Science and Math

Portraits of famous women in math and science including: Lydia Villa-Komaroff, Gertrude B Elion, and Chien-Shing Wu.

The resources listed are just a sample of those available from the Midwest Center. Educators may search the library's bibliography for information on Math Resources and other topics at the MEAC web site (<http://meac.educ.ksu.edu>). Materials may be

requested on-line or by calling the number listed below.



For More Information:

Midwest Equity Assistance Center Resource
Library

Dr.. Charles Rankin, Director
Kansas State University
401 Bluemont Hall
Manhattan, KS 66506
785-532-6408 or
1-800-232-0133 Ext. 6408
<http://meac.educ.ksu.edu>

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