

## TRANSFORMING THE ROLE OF WOMEN AND GIRLS IN SCIENCE AND ENGINEERING

<http://www.womeninscience.org/>

Glenn Busby

Mary Darcy

WAMC Northeast Public Radio

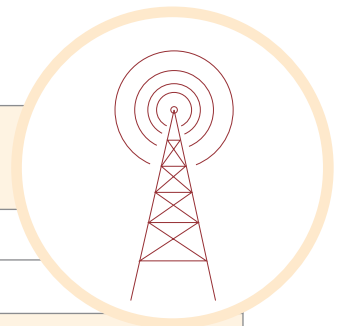
Listen to four **radio series** exploring different facets of girls' science education at this WAMC Northeast Public Radio-produced Web site. The Tech-Club interviews successful professionals; and Out-Loud features women's STEM education from varied perspectives.

04-36130

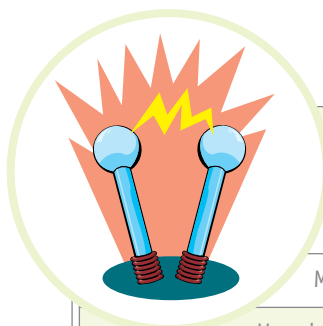
03-32765

02-25030

Grade level: elementary, middle, high school



**See also: Audio Portraits of Women in STEM: HER-STORY CD Set (CD-ROMs)**



### EXPLORING PHYSICS— ELECTRICITY AND MAGNETISM

<http://www.exploringphysics.com/>

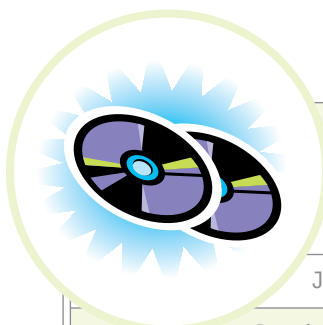
Meera Chandrasekhar

University of Missouri–Columbia

How does a circuit work? How does a capacitor differ from a battery? This **CD-ROM** guides girls through experiments designed to answer these and other physics questions through hands-on activities.

94-50533

Grade level: elementary school, middle school, high school



### SEEING GENDER: CD-ROM SET

<http://www.k-state.edu/seeinggender/index.htm>  
[http://www.meac.org/Resources/ed\\_services/SG\\_WEB/INDEX.HTM](http://www.meac.org/Resources/ed_services/SG_WEB/INDEX.HTM)

Jacqueline Spears

Kansas State University

Do science and math classrooms inadvertently harbor gender biases? If so, what forms do these biases take, and how can educators address them? Questions like these, and many others, are discussed on this **CD-ROM** set. Footage includes interviews with middle and high school teachers.

02-25184

Grade level: middle school, high school, undergraduate

### INTRODUCTION TO 3-D SPATIAL VISUALIZATION: AN ACTIVE APPROACH

<http://www.delmlearning.com>

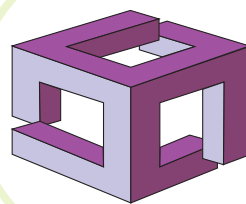
Sheryl Sorby

Michigan Technological University

Workbook and **instructional software** combine to sharpen students' ability to visualize three-dimensional shapes, a skill essential to success in STEM. The friendly, intuitive interface appeals to learners from diverse backgrounds. Includes Teacher's Resource Guide with sample syllabi and quizzes for smooth integration into any engineering, graphics, or geometry course.

04-29020

Grade level: undergraduate



### AUDIO PORTRAITS OF WOMEN IN STEM: HER-STORY CD SET

<http://www.womeninscience.org/>

Glenn Busby

Mary Darcy

WAMC Northeast Public Radio

This two part **radio series** features HER-STORY: THEN, and HER-STORY: NOW. Did you know that the technology that operates your cell phone was designed by a silver screen goddess in the 1940's? Or, that the first computer programmer was actually the daughter of an 18th century English poet? Actress Kate Mulgrew (internationally known for her role as Captain Kathryn Janeway in Star Trek Voyager) narrates these and other fascinating tales of women's historical contributions to science and technology. Winner of a 2006 Gracie Award. Want to learn what today's women pioneers in science and technology are doing to encourage the next generation? HER-STORY: NOW explores award-winning programs that encourage and assist young women in pursuing education and careers in science, technology, and engineering.

03-32765

Grade level: all ages





## POWERFUL SIGNALS: TRANSFORMING THE ROLE OF WOMEN AND GIRLS IN SCIENCE AND ENGINEERING CD SET

<http://www.womeninscience.org/>

Glenn Busby

Mary Darcy

WAMC Northeast Public Radio

Powerful Signals is a special radio series composed of two parts. First, 10 feature-length stories explore programs across the U.S., that are working with girls to encourage the next generation of women in science and engineering. Featuring

- **Techbridge Oakland:** Techbridge offers a "bridge" between middle and high school, including programs designed to encourage girls in science. Now after five years, this program has taught 1,250 mostly minority working class and middle income students.
- **The Gidget Pipeline Project K-12:** Ohio State University's After School Technology Club is educating girls to be technology designers, not just users. Gidget is generating a curriculum that will allow other educators to duplicate the after-school technology experience.
- **The Lincoln Experiment:** Ten years ago, the Lincoln School in Providence, Rhode Island developed a "physics-first curriculum." Today, 100% of the school's seniors have at least three years of lab science by graduation.

Second, three audio diaries follow the day-to-day lives of women who have chosen a course of study or career in science and technology. Featuring

- **Tracy Drain: The Mars Reconnaissance Orbiter — NASA's Jet Propulsion Laboratory:** A systems engineer, Tracy, describes her journey to launch . . . and the white knuckle wait to see if the project will successfully reach orbit.
- **Dr. Lori Polasek: Saving Harbor Seals — Alaska Sea Life Center:** Lori talks about her life as a marine biologist on land and sea, and her effort to help save the harbor seals.
- **Jennifer Ellsworth: Could Fusion Help Solve the Fuel Crisis? — Massachusetts Institute of Technology:** Jennifer and her team at MIT are attempting to create a fusion device that might lead to a new source of energy for the world. Jennifer talks about what life is like for a grad student involved in this work.

To listen to these and other mind-opening audio profiles about women in science, technology, engineering, and mathematics, visit the WAMC radio Web site at [womeninscience.org](http://womeninscience.org). Users receive the **audio CD** set free when they send comments to the radio station.

03-32765

Grade level: all ages

**DRAGONFLYTV®: AUTHENTIC INQUIRY VIDEOS**

<http://www.pbskids.org/dragonflytv>

Richard Hudson      Twin Cities Public Television, St. Paul–Minneapolis

Girls can build a Hovercraft or a mini water park ride, test how a hockey stick's "flex rating" can help score a goal, and find out if dogs are really colorblind. These and many other full-inquiry investigations can be found on DragonflyTV®, broadcast nationally on PBS. The **video segments** and activity guides can be downloaded from the Web site and are available as podcasts as well.

99-09828—Season 1  
01-25738—Seasons 2 and 3

03-37350—Season 4  
05-15566—Season 5

04-36260—SciGirls

Grade level: elementary, middle school

**TECH SAVVY GIRLS VIDEO AND RESOURCE GUIDE**

<http://www.aauw.org/research/all.cfm>  
<http://www.fcps.edu/cpsapps/fairfaxnetwork/videostore/level2.cfm?ProductID=23>

Nancy Lark

American Association of University Women Educational Foundation

How can parents get their daughters interested in technology? How should schools and community programs get involved? These questions and many others are explored in the **video** Tech Savvy Girls. The accompanying resource guide provides discussion topics and helps viewers prepare for the video.

03-32841

Grade level: elementary school, middle school, high school





### GIRLS CREATING GAMES

<http://programservices.etr.org/gcgweb/>

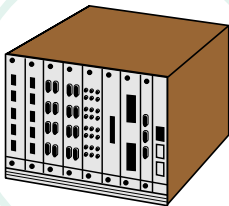
Jill Denner

Education, Training, Research Associates

Imagination soars in these **computer games** designed and programmed by middle school girls using Macromedia Flash MX. Among the highlights: "When Cheese Attacks," "Who Is Your Dream Date?" and "Cats on the Run." These choose-your-own-adventure style games feature cool sound tracks and vivid animation.

02-17221

Grade level: middle school



### GIRLS REDESIGNING AND EXCELLING IN ADVANCED TECHNOLOGY

<http://www.miamisci.org/great/index.html>

Judy Brown

Miami Museum of Science, Inc.

*If you believe, you can achieve!* This **video** documents the success of science and technology programs for middle school girls at the Miami Museum of Science and Planetarium. Students, parents, and instructors attest to the transformative effect of gender-conscious pedagogy. Includes discussion of how to replicate the program locally.

01-14669

Grade level: middle school

### YOU CAN BE ANYTHING! A MUSIC VIDEO TO ENCOURAGE GIRLS AND WOMEN TO EMBRACE TECHNOLOGY



<http://www.umbc.edu/be-anything>

Claudia Morrell

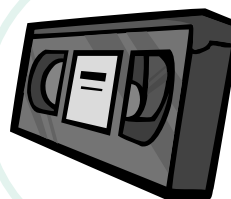
University of Maryland–Baltimore County

This high-energy music **video** shows girls that technology is everywhere—and that it isn't just for boys anymore. Involve girls in information technology by following online instructions for integrating the video into classroom activities. Or link to the Speakers' Bureau on the Web site, where educators can contact a female Information Technology professional specially trained to present the video.

02-25079

Grade level: middle school

### THE CASE OF MISSING HUMAN POTENTIAL



<http://www.missingpotential.org>

Frank Wilson

WVIZ/PBS Ideastream<sup>SM</sup>, Cleveland

A one-hour **videotape**, *The Case of Missing Human Potential*, tracks the root cause of the gender gap in the STEM workforce back to schools, exploring how teaching methods can be either a window of opportunity to young women or a closed door. The problem is presented as a fast-paced mystery, with top-selling mystery writer Les Roberts hosting the investigation, assisted by Dr. Kathryn Sullivan, the first woman to walk in space. The program describes efforts by schools, communities, and businesses to address gender representation in STEM.

02-17109

Grade level: professional development

#### See also:

**Seeing Gender: CD-ROM Set** (CD-ROMs)

**Through the Glass Wall** (Web sites)

**Computer Game Design: Involving Girls** (Web sites)

**Think Again . . . Girls Can!** (Web sites)

**Tech Team: Project-Based Education for Middle School Girls** (Web sites)

**Opening the Horizon: Strengthening Science Education for Middle School Girls in Rural Southwest Missouri** (Web sites)