American culture is multi-faceted and complex, an elaborate mosaic of ethnic groups, diverse heritages, interwoven traditions, and multiple perspectives. There is likely no region on earth with more reasons or resources to embrace and celebrate human diversity than North America. Unfortunately, the potential goes unrealized, with people of color woefully underrepresented in many professions, particularly those related to the sciences and allied technical fields. An ever-expanding gap, for example, continues to separate the degrees of participation in science programs and careers among European
Americans and African Americans (Danek, Calbert, & Chubin, 1994).

There is no single explanation for the gap, but two factors are surely part of the equation: (a) African Americans experience more obstacles along the path to careers in science (Malcom, 1990; Pearson & Bechtel, 1989), and (b) African Americans have fewer opportunities to "see" people like themselves in the sciences. As Pearson (1989, p.140) has mentioned, "many black students...who may have an interest in science and technical careers are first-generation college students. Thus, they may seldom have had the opportunity to meet and be exposed to blacks who work in these fields." There is, then, an ongoing need to counteract the twin forces of racism in society and the self-limiting aspirations acquired among minority populations. As Ford (1994) has said, "Ultimately racism cannot survive where differences and diversity are tolerated, accepted, welcomed, honored, and celebrated."

This listing of books and other resources is intended for readers of all cultural and ethnic identities. The readings present a rich variety of contributions and achievements made by African American scientists, engineers, and inventors. Stories and biographies from these sources can be used to facilitate the celebration of diversity in the sciences among all readers as well as fuel the fires of imagination among young African American students. The various accounts highlight the considerable contributions of African Americans to the ongoing development of science and engineering within the fabric of American society. Parents, teachers, and other education practitioners are encouraged to use this list to provide an enriched reading environment for young people.


REFERENCES CITED


Pearson, W., Jr. (1989). The future of blacks in science: Summary and


COLLECTIVE BIOGRAPHIES


Examines the lives and achievements of African American scientists from colonial days to the present.


This bibliography was issued in honor of both Black History Month and Inventors Day in February 1991. It focuses on the contributions of African Americans in the areas of science, technology, medicine, and allied fields such as dentistry and nursing. The materials cited emphasize the accomplishments of individuals from all parts of the United States, in all periods, and from all backgrounds. The bibliography includes books, selected periodical articles, patents, and other materials.


INDIVIDUAL BIOGRAPHIES


Chronicles the life of an 18th-century Black tobacco farmer who taught himself mathematics, astronomy, and clockmaking, became famous for his almanacs, and participated in the original survey of Washington, D.C.


A biography of the surgeon who conducted research on the properties and preservation of blood plasma and was a leader in establishing blood banks.


A bibliography of the noted physician, focusing on his discovery of methods for separating plasma from blood.


Describes the life and accomplishments of the former slave who became a scientist and devoted his career to helping the South improve its agriculture.


The chief of pediatric neurosurgery at Johns Hopkins University hospital tells about his life and some of his cases.


A biography of the Black surgeon who was noted for his research on blood plasma.

A biography of Frederick McKinley Jones, the Black engineer and inventor who is credited with many inventions, including refrigeration units for trucks and railroad cars, the portable x-ray unit, and the ticket dispenser.


A brief biography of the woman mathematician who was the first African American to earn a Ph.D. from the University of Georgia.


Follows the life of the Black explorer who accompanied Robert Peary on the expedition to the North Pole


A biography of the American seaman and merchant who encouraged fellow Blacks to colonize Sierra Leone, sought a stronger legal position for Blacks in America, and was responsible for a Massachusetts law giving Blacks the right to vote.


About Bessie Coleman.


A biography of Elijah McCoy, the Canadian-born Black American who studied engineering in Scotland and patented over 50 inventions despite the obstacles he faced because of his race.


A biography of the Black astronaut who was a crew member aboard the ill-fated Challenger space shuttle mission that exploded on takeoff in January 1986.

Shoes for everyone: a story about Jan Matzeliger. Mitchell, B. Minneapolis: Carolrhoda

A biography of the half-Dutch/half-Black Surinamese man who, despite the hardships and prejudice he found in his new Massachusetts home, invented a shoe-lasting machine that revolutionized the shoe industry in the late 19th century.


Relates the story of an African American woman who overcame childhood difficulties with mathematics and went on to earn a Ph.D. in chemistry.


A brief biography of June Rooks, a Black woman who contracted polio as a child, struggled against poverty, earned her degree in physics, and went on to become an operations research analyst with the U.S. Navy.


Guy Bluford, the first Black American in space, was a crew member of the space shuttle Challenger on its August 1983 flight.


A brief biography of the inventor of the traffic light and the gas mask.


A biography of the Black surgeon who, among other achievements, was the first to perform open heart surgery.


A biography of Frances Reed Elliott Davis whose determination to help relieve the physical pains of her people led her to become the first Black nurse enrolled by the American Red Cross.

BIOGRAPHICAL REFERENCE TOOLS

A Salute to historic Black firsts. Publisher and editor, Richard L. Green. Chicago: Empak

A second volume, profiling 332 contemporaries, is in press.


Revision of A pictorial history of Black Americans, 5th ed. (c1983)


603-632


RESOURCES FOR TEACHERS


Includes bibliographical references.


A series of articles addressing concerns over the barriers faced by minority students seeking careers in science and technology.

Books by African-American authors and illustrators for children and young adults.

Sources of Book and Film Reviews and Recommendations


Published annually since 1963, this is an annotated bibliography of new books in science, technology, consumer medicine and related subjects intended primarily for the general adult reader. A special feature is the selection of books for libraries which buy only 50-100 titles each year.


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