

Curriculum Connections

An American Story: The Multiphone

- Background information for the educator

Learning by Doing: Design a Music Machine

- Classroom activities based on the object

Interdisciplinary Content Standards

- WR 3 - use critical thinking and problem-solving skills
- WR 4 - demonstrate self-management skills
- VPA 1.2 - refine skills through creating art
- VPA 1.3 - utilize arts elements to produce artistic products
- LA 3.1 - speak in a variety of contexts
- LA 3.2 - active listening, interpreting, responding
- LA 3.5 - view, understand, use non-textual information
- S 5.1 - identify and understand systems of interacting components
- S 5.2 - develop problem-solving skills, formulate hypotheses, interpret data
- S 5.4 - develop understanding of technology as application of scientific principles
- SS 6.4 - acquire historical understanding of societal ideas/forces

Learning Styles & Multiple Intelligences

auditory
visual
linguistic
logical-mathematical
spatial
intrapersonal
bodily-kinesthetic

Related Subject Areas

technology
music
inventors and inventions
sound waves



An American Story

The Multiphone explained

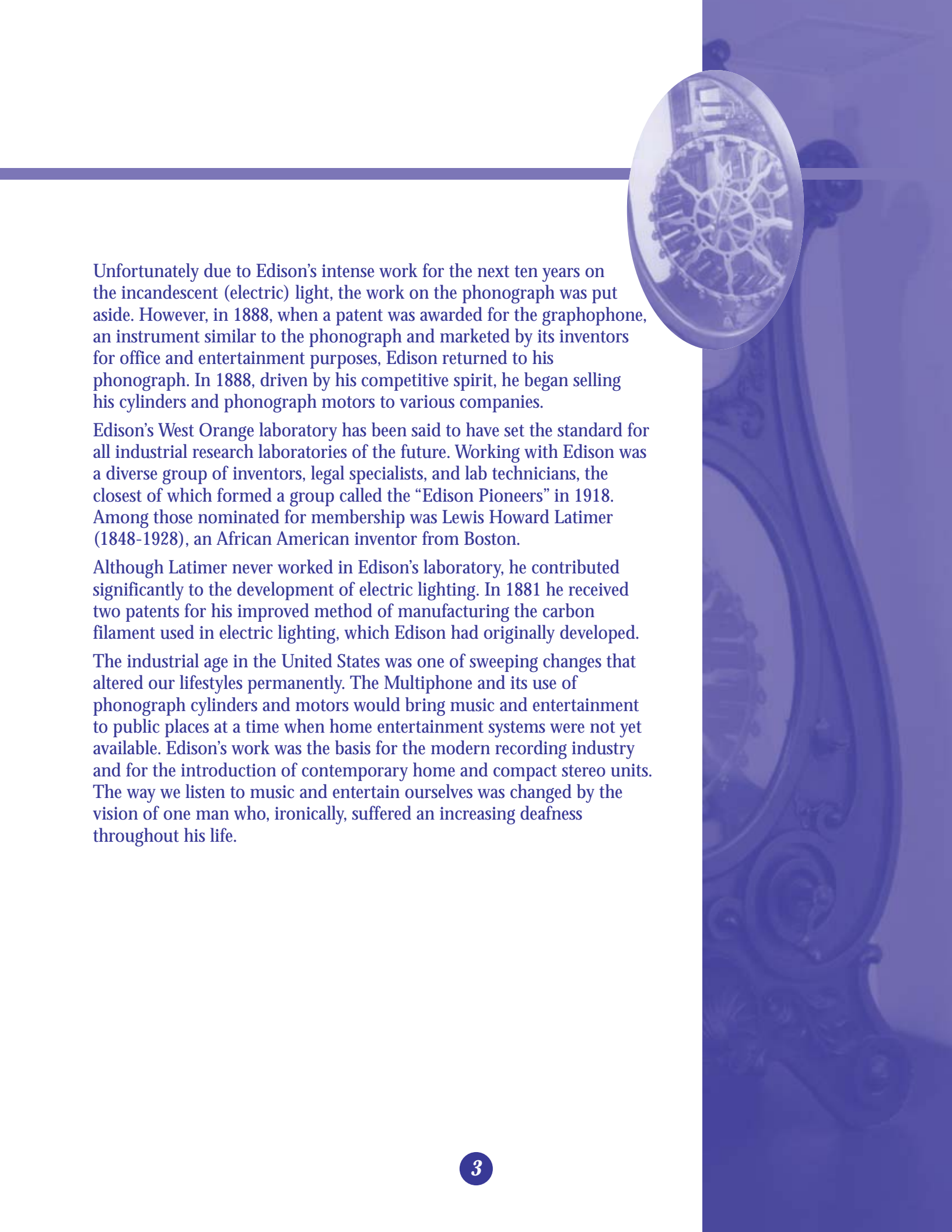
This Multiphone is one of many different models of coin-operated phonographs that emerged from the late 1880s on. The Multiphone Company was in operation from 1905-08. Although the Multiphone contains parts invented by Thomas A. Edison, it is not an Edison company product.

The Multiphone was a precursor to the modern jukebox. However, the Multiphone did not play records as we know them; it played wax cylinders that had grooves, like records that created sound when read by a stylus. It was these cylinders and the phonograph motor that were some of Edison's inventions. The Multiphone was developed within the context of Edison's work on the phonograph, one of his most famous and culturally significant inventions.

Multiphones and other coin-operated phonographs were placed in public spaces such as penny arcades for entertainment purposes starting in the 1890s. They proved to be popular, especially because home phonographs were not available at that time. The Multiphone, a large piece of machinery, was one of the more elaborate versions of the coin-operated phonograph. A person put in a nickel, and turned a hand-crank to choose from a selection of 24 cylinders (songs).

How did the phonograph revolutionize entertainment?

The idea for the phonograph originally came when Edison was working on a device for recording messages over the telephone. In the course of his research, Edison hypothesized that it might be possible to record sound waves and at a later time, play them back. In 1877 when Edison and his staff played back the first ever recorded words, "Mary had a little lamb," even he was surprised with the success of his experiment. His purpose in creating the phonograph had been for use in office dictation machines and for the recording of telephone messages. While today we think of a phonograph as specifically being a record player, the word "phonograph" means a device that reproduces sounds by means of a vibrating stylus on a groove.



Unfortunately due to Edison's intense work for the next ten years on the incandescent (electric) light, the work on the phonograph was put aside. However, in 1888, when a patent was awarded for the graphophone, an instrument similar to the phonograph and marketed by its inventors for office and entertainment purposes, Edison returned to his phonograph. In 1888, driven by his competitive spirit, he began selling his cylinders and phonograph motors to various companies.

Edison's West Orange laboratory has been said to have set the standard for all industrial research laboratories of the future. Working with Edison was a diverse group of inventors, legal specialists, and lab technicians, the closest of which formed a group called the "Edison Pioneers" in 1918. Among those nominated for membership was Lewis Howard Latimer (1848-1928), an African American inventor from Boston.

Although Latimer never worked in Edison's laboratory, he contributed significantly to the development of electric lighting. In 1881 he received two patents for his improved method of manufacturing the carbon filament used in electric lighting, which Edison had originally developed.

The industrial age in the United States was one of sweeping changes that altered our lifestyles permanently. The Multiphone and its use of phonograph cylinders and motors would bring music and entertainment to public places at a time when home entertainment systems were not yet available. Edison's work was the basis for the modern recording industry and for the introduction of contemporary home and compact stereo units. The way we listen to music and entertain ourselves was changed by the vision of one man who, ironically, suffered an increasing deafness throughout his life.



Multiphone, c. 1906
Collections of the New Jersey Historical Society, Newark

