

FLORENCE McKENZIE

Class grouping:

Whole class and pairs

Time:

30 minutes

Purpose:

The purpose of this activity is to introduce students to the achievements of Florence Violet McKenzie. Florence was interested in inventing and electronics from a very young age. Despite this being a male-dominated industry, she followed her passion and became an electrical engineer—probably the first woman to achieve this in Australia. McKenzie's experience was invaluable in training women for wireless telegraphy and signalling work in preparation for World War II and she played a large role in breaking 'the glass ceiling' in regard to women's involvement in the navy.

Please note: this resource is most effective when students are given the opportunity to complete the vocabulary activity prior to the reading.

Activities:

1. Individually or in pairs: Florence Violet McKenzie vocabulary sheet.
2. Whole class activity: read and discuss article on Florence Violet McKenzie.
3. Individual/paired task: Morse code activity.

Preparation and Materials:

- Print copies of reading materials.
- Print copies of vocabulary handout.
- Print Morse code handout.

Activity 1

Using a dictionary or the internet, look up and provide a definition for the following words, names and acronyms prior to reading the article on Florence McKenzie.

Telegraphist

Engineer

Morse code

Corps

Albert Einstein

EAW

WAAAF

WRANS

OBE

Activity 2

Have students read the article below about Florence Violet McKenzie. Discuss the article with the class.

Florence Violet McKenzie (1890–1982)

Florence Violet McKenzie, signals trainer, was born in Melbourne. Educated at the Girls' Public High School, Sydney, she enrolled in the science faculty at the University of Sydney in 1915. Having shown a keen interest in electricity by 'fooling around with the wiring in their home', Florence (then Wallace) studied electrical engineering at Sydney Technical College, from which she graduated in 1923 with a diploma—probably the first woman in Australia to have received such a qualification.

In 1921 Wallace bought a radio sales and repair shop in Royal Arcade, Sydney, which she ran while studying. She also worked as an electrical engineer and contractor and experimented with television. In 1924 Wallace became Australia's first female certificated radio telegraphist, the first female member of the Wireless Institute of Australia, and the first woman in Australia to hold an amateur wireless licence.

In 1924, Wallace married Cecil McKenzie, an electrical engineer. In 1934 she founded the Electrical Association for Women (Australia) where women could learn to use an electric kitchen and modern appliances. She published the *EAW Cookery Book* (1936), the first women's guide to cooking with electricity; an educational book for children, *The Electric Imps* (1938), and articles on electrical safety. McKenzie corresponded with Albert Einstein, to whom she sent a didgeridoo and information on Aboriginal people.

In July 1938 McKenzie joined the Australian Women's Flying Club and became responsible for training women pilots in Morse code. With war approaching, she foresaw a need for female wireless telegraphists, initially to replace men in civilian roles but eventually to serve in the forces. When World War II began, McKenzie had already trained nearly a thousand women in signalling subjects; she went on to train some two thousand more, a third of whom joined the forces.

McKenzie hoped that the Royal Australian Air Force would recruit her telegraphists but even when the Women's Auxiliary Australian Air Force was formed in March 1941, the Advisory War Council resisted. In April, growing impatient and still battling official opposition, she persuaded the Naval Board in Melbourne to accept 14 of her operators for the navy. These women formed the nucleus of the Women's Royal Australian Naval Service. Meanwhile, the role of the Women's Emergency Signal Corps (WESC) expanded to include pre-enlistment signals training for prospective Australian servicemen and continuing instruction for American personnel. Her former students were highly regarded in the services and many became instructors. McKenzie was appointed an honorary flight officer in the WAAAF in April 1941, in appreciation of her work. By August 1945 her school had trained some twelve

thousand men in Morse code, visual signalling and international code. After the war, McKenzie's school continued voluntarily teaching signalling courses, training 2450 civil airline crewmen and 1050 merchant navy seamen by 1952. Although she was an official examiner for the Department of Civil Aviation, the school never received official status. In 1950 McKenzie was appointed OBE. She closed her school in 1955 and became patroness of the Ex-WRANS Association in 1964. Her leisure pursuits included scientific study, reading, gardening and jam-making.

Barely five feet (153 cm) tall, McKenzie had a friendly and unassuming manner. She took a personal interest in each of her students, to whom she was affectionately known as 'Mrs Mac'. Following a stroke, McKenzie unveiled a plaque in her honour at the Mariners' Church, Flying Angel House, Sydney, in 1980. Predeceased by her husband and childless, she died at Greenwich on 23 May 1982 and was cremated¹.

¹ This article was published in Nelmes, Michael. *Australian Dictionary of Biography*, Volume 18, (MUP), 2012 and was altered where appropriate to suit a secondary school audience.

Activity 3

1. Practise writing your name and date of birth using Morse code.
2. Imagine that you are in the Royal Australian Naval Service during World War II. Using Morse code, write a 'secret' message to your partner. Swap messages and try to translate your messages.

International Morse Code

1. The length of a dot is one unit.
2. A dash is three units.
3. The space between parts of the same letter is one unit.
4. The space between letters is three units.
5. The space between words is seven units.

A ● —
B — ● ● ●
C — ● — ●
D — ● ●
E ●
F ● ● — ●
G — — ●
H ● ● ● ●
I ● ●
J ● — — —
K — ● —
L ● — ● ●
M — —
N — ●
O — — —
P ● — — ●
Q — — ● —
R ● — ●
S ● ● ●
T —

U ● ● —
V ● ● ● —
W ● — —
X — ● ● —
Y — ● — —
Z — — ● ●

1 ● — — —
2 ● ● — —
3 ● ● ● — —
4 ● ● ● ● —
5 ● ● ● ● ●
6 — ● ● ● ●
7 — — ● ● ●
8 — — — ● ●
9 — — — — ●
0 — — — — —

