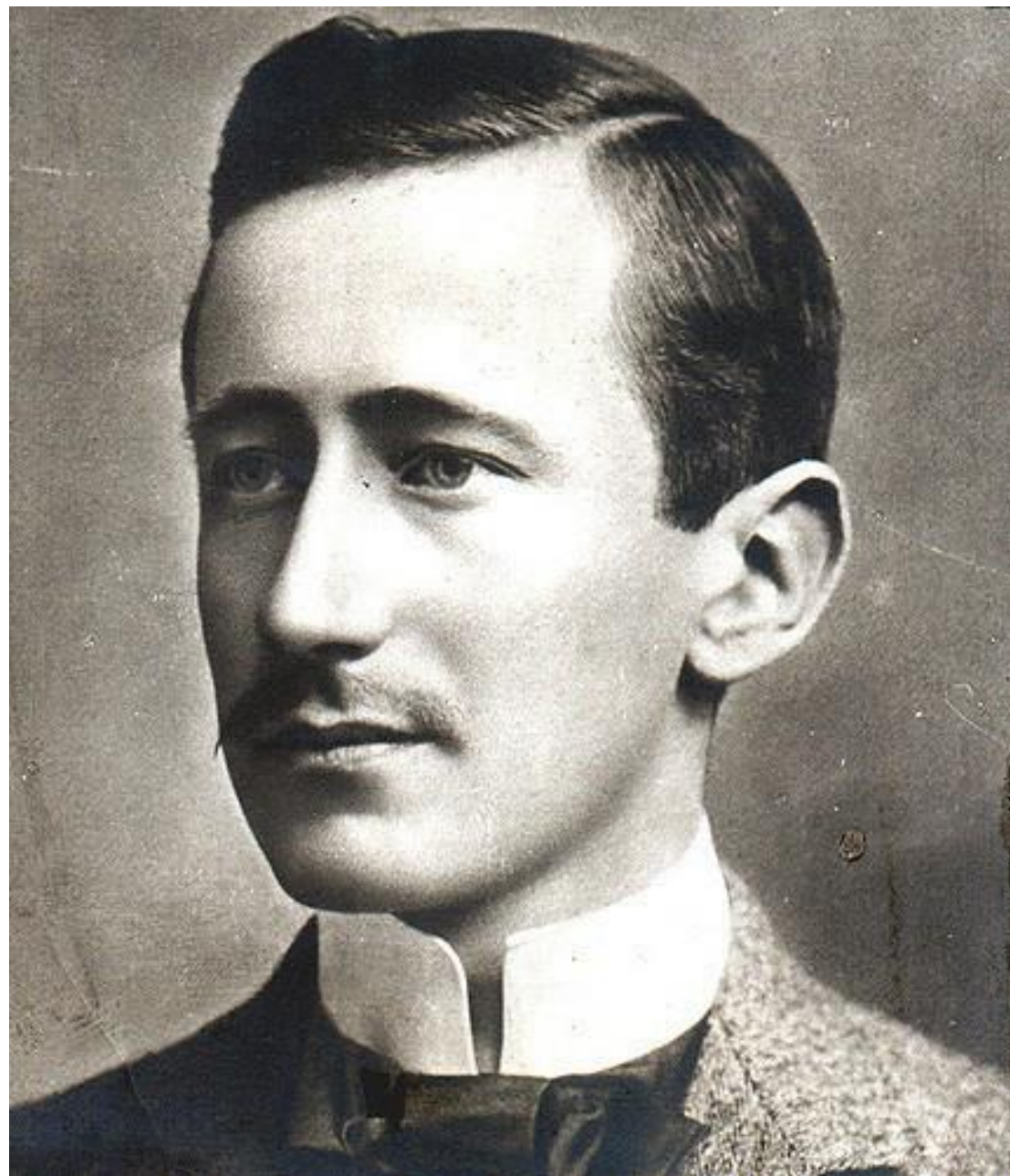


PBS Lesson Series

ELA, Grade 5, Lesson 9  
Teacher Packet



L9-A



L9-B



L9-C

# AMERICAN MORSE CODE

A ·-	N -·	1 ·--·
B -···	O ··	2 ····
C ···	P ····	3 ···-
D -··	Q ···-	4 ···-
E ·	R ···	5 ----
F ·-·	S ···	6 ·····
G ---	T -	7 ---·
H ....	U ·-·	8 -···
I ··	V ···-	9 -··-
J -·-·	W ·-·	0 —
K -·-	X ·-··	
L —	Y ···	
M --	Z ····	





L9-E

## Student independent Practice:

Imagine you are 20-year-old Guglielmo Marconi! Since you were young, you have immersed yourself in everything *science*. You read books about science, you tinker with wires and batteries, you take things apart and put them back together, you even know all about the famous inventions that inspire your curiosity, like Alexander Graham Bell's telegraph.

Just two years ago, you had a wonderful idea: to create a worldwide communication system! As you work toward making your idea a reality, you have been focused on the electromagnetic wave. Although scientists have been able to prove that electromagnetic waves can travel a very short distance, you are convinced that they can travel much, much further. Not to mention, you believe electromagnetic waves are the key to sending messages far distances and sending them *wirelessly*!

However, you don't have a good place to continue your research and experimentation. You need a laboratory! Your mother agrees and says you can use the attic, but warns you that your father will likely not support your new endeavor. She suggests you write him a letter and leave it on his desk, convincing him that your laboratory could lead to an amazing invention! You agree and get started writing your letter.

Use a clean piece of paper to write your *very convincing* letter. Don't forget to reference your organizer for facts and details. Be sure to include:

- why you really need a laboratory to continue your work.
- how close you are to making an important discovery: that electromagnetic waves can travel much further than anyone knows.
- what you already know about electromagnetic, how they work, and why you believe they are the key to sending messages far distances, *wirelessly*.