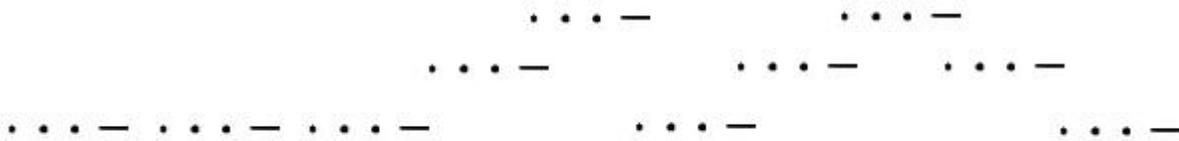


ENDLESS POSSIBILITIES—5th Grade Field Trip
SOCIAL STUDIES LESSON “MOTIFS AND MORSE CODE”
CREATED BY CHRIS STONNELL, MANAGER OF EDUCATION, CHARLOTTE SYMPHONY

Motifs and Morse Code

Beethoven built the first movement of his Symphony No.5 around a rhythmic motif: short-short-short-long. This motif is the building block for the whole movement. For example the beginning looks like this:



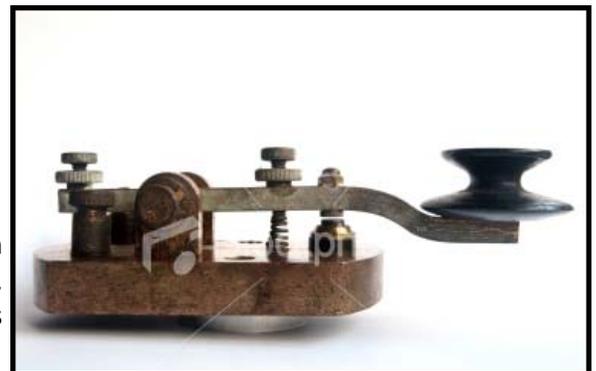
Morse code is another language that uses short and long sounds as a means of communication. Named after American physicist, Samuel Morse, who helped develop it, Morse code uses an organized system of pulses of electric current that are transmitted via a telegraph system. Before cell phones and other modern technologies, this was one of the main ways that ship crews communicated with one another and with people on land.

One of the most well-known Morse code patterns is the emergency signal SOS. SOS is signaled by 3 dits, 3 dahs, and 3 dits (· · · — — · · ·). This can be sent many ways: keying a radio on and off, flashing a mirror, toggling a flashlight and similar methods. Although it uses the codes for the letters S and O, SOS is not three separate characters, rather, it is a prosign SOS, and is keyed without gaps between characters.

International Morse Code

1. Short sounds are called “dit” and long sounds are called “dah”
2. One “dah” is equal to three “dits”
3. Between letters of words there is a silence of three dits.
4. Between words there is a silence of seven dits.

If we transcribe the Symphony No. 5 motif to Morse Code, which would be “dit-dit-dit-dah”, it would represent the letter “V”. During World War I and World War II the United States and its allies used this motif as a victory piece (V is for Victory).



Morse Code Telegraph Machine

Learning Activity:

1. Have students write their names in Morse Code (using the chart on the next page).
2. Have them speak aloud their names as if transmitted in code by using the dit and dah language. Be sure to remind them of the silence that occurs between letters and words.
3. Next have them play their names on an instrument or by tapping on their desks.
4. Have the students write and then tap out short messages using Morse code. Have students partner up and play the roles of wireless operators on ocean liners transmitting messages to one another. While one taps out a message, the other will transcribe it.

Morse Code Alphabet and Numbers

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