



# Morse Code Worksheets

Name: \_\_\_\_\_

## Tangled Lines




Morse codes were originally transmitted through telegraph lines between stations, thus requiring long miles of lines to connect one place to another. Based on the clues given, form the right term using the jumbled letters on the word pile.




Name: \_\_\_\_\_

## Get the Message




Although Morse code is now rarely used communication, the code is still used in various ways like tattoos, art, and by some naval and radio operators. Decode the Morse code shown on the pictures below.




MORSE CODE WORKSHEETS

Name: \_\_\_\_\_

## Historical Code



By 1850, 12,000 miles of telegraph lines were laid out across the United States enabling public use of the technology. Answer the following questions by reading more about the development of Morse code.



What motivated Samuel Morse to make his own telegraph and communication system?

How did Alfred Vail come up with the representations for the Morse code alphabet?

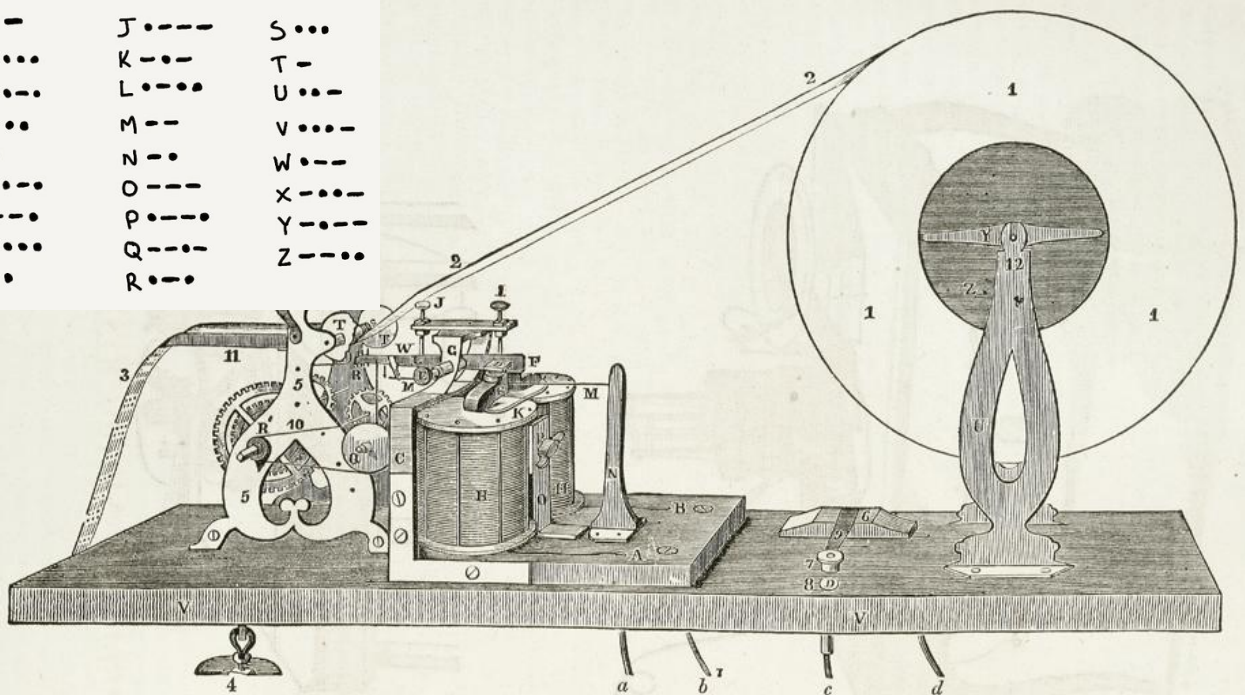
What was Samuel Morse's first telegraph message?

MORSE CODE WORKSHEETS

KIDSKONNECT.COM

# Morse Code Facts

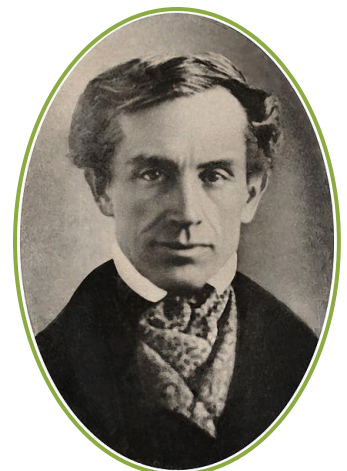
A ••	J •••••	S •••
B ••••	K •••	T ••
C ••••	L ••••	U •••
D •••	M ••	V ••••
E •	N ••	W •••
F ••••	O •••	X ••••
G •••	P ••••	Y ••••
H ••••	Q ••••	Z ••••
I ••	R •••	



Morse code is used to send telegraphic information through two signal durations as dots and dashes that correspond to the alphabet, numbers, and punctuation. It transformed how people communicated with each other across long distances.

## HISTORY AND DEVELOPMENT

- ★ Samuel F. B. Morse, along with Leonard Gale and Alfred Vail, was able to develop a telegraph with a single circuit. Using this telegraph, the operator key is pushed down, sending an electrical signal to the receiver through a wire.
- ★ Around 1837, Morse and Vail developed a code that assigned a set of dots and dashes to the alphabet and numbers based on how often they are used in the English language.



*Samuel Morse, the inventor of Morse code*



# Morse Code Facts

- ★ Simple codes were assigned to letters that are frequently used and those that are not used as often had more complex and extended codes. For example, the letter E, which is commonly used, is represented by ● while the letter Q is — — — ● — .
- ★ On May 24, 1844, Samuel Morse sent the first Morse telegraph from Washington, D.C., to Baltimore, Maryland.

- ★ In Samuel Morse's telegraph system, a paper tape is indented with a stylus whenever an electric current is received. Due to its mechanical components, the receiver makes a clicking sound whenever the stylus moves to mark the paper tape.



*A telegraph sounder (left) and key (right)*

- The operators initially translated the message based on the indentations on the tape but soon they realized they could translate these clicks directly into dots (dits) and dashes (dahs) without the need to look at the paper tape.
- ★ The earliest version of the code only included numerals that represent words compiled in a codebook. Alfred Vail expanded this code in 1840 to include letters and special characters. This code became known as the Morse landline code or the American Morse code and was used since 1844.
  - ★ In 1848, Friedrich Clemens Gerke proposed a more refined version of the code, which became known as the "Hamburg alphabet." This alphabet was later on adopted by the German-Austrian Telegraph Society in 1851. In 1865, the International Morse code was standardized in Paris at the International Telegraphy Congress in 1865.



# Morse Code Facts

## MODES OF TRANSMISSION



*Using a phone's torch light to send Morse code*

- ★ Morse code was initially transmitted as electrical pulses on a telegraph wire, but it can also be sent in many ways. It can be carried as an audio tone, as short and long radio signals, or as visual code like flashing light. Some mine rescuers pulled on a rope to send a Morse code: quick pull for dots and long pulls for dashes.
- ★ Historians have called the Morse code the first digital code.

- ★ Experienced operators are faster in sending and receiving Morse code messages. Slight variations in the duration of dashes or gaps are introduced by the skill of the operators. This is called their "fist," and the more experienced ones can recognize the individuals who sent the particular message by the fist alone.

## RISE AND DECLINE OF THE CODE

- ★ Journalists and newspaper businesses greatly benefited in electric telegraphy. Pieces of news can be transmitted in Morse code between stations almost instantly.
- ★ During World War II, radiotelegraphy or electric telegraphy was used for long-range ship-to-ship communication. Encrypted messages using Morse code was favored against the unsecured voice radio systems on ships.



*Morse code was used extensively to send messages to armed forces during World War II*



# Morse Code Facts

- ★ Morse code was also used by long-range patrol planes that were tasked to scout enemy cargo ships, troopships, and warships.
- ★ The famous S.O.S., though it may seem to be an abbreviation, is actually just a distinctive Morse code used as a distress signal. This Morse code is transmitted with no spaces between the sequence of dots and dashes. Because it is highly used in emergencies, S.O.S. has been used informally to indicate a crisis.
- ★ On January 31, 1997, the French Navy stopped using Morse code and transmitted the final message "Calling all. This is our last cry before our eternal silence."
- ★ On July 12, 1999, the final commercial Morse code transmitted in the United States signed off with Samuel Morse's 1844 message.
- ★ The Morse code S.O.S. was an international standard for maritime distress until 1999 when the Global Maritime Distress Safety System (GMDSS) replaced it.



*SOS was chosen in the first International Radiotelegraph Convention as the standard maritime distress signal*



*1939 Morse code training for radio operators on OSS*

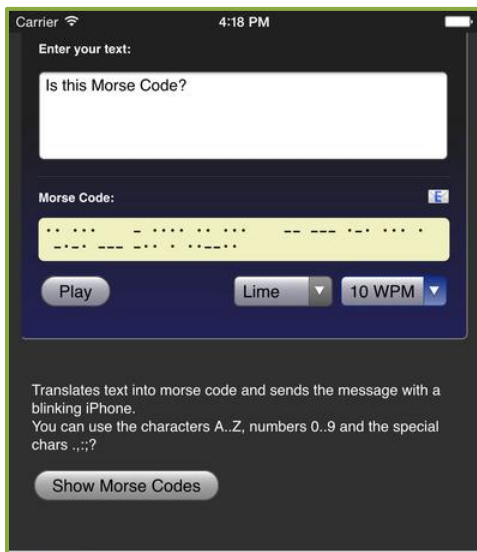
- ★ The development of new technology for communication made the regular widespread use of the telegraph fall down. It was soon replaced with more convenient ways of communication.
- ★ Though no longer used as much, the United States Air Force still teaches Morse code to ten people every year, as of 2015.



# Morse Code Facts

## MODERN DAY USES FOR THE PUBLIC

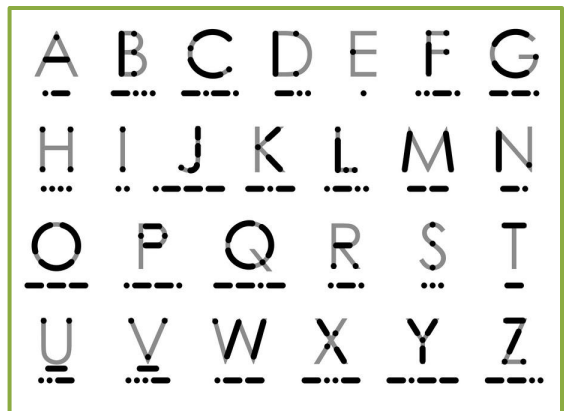
- ★ Morse code has been used for over 160 years, longer than any electrical coding system.
- ★ The old Nokia tone alert for incoming messages is actually a Morse tone for SMS.



- ★ People of different disabilities also use Morse code as assistive technology. Android 5.0 and higher have a feature that enables users to input messages using Morse code. Persons with severe motion disabilities can send Morse code with minimal motor control.
- ★ Computers can also translate Morse code into speaking communication aids.

*An iPhone app by Piet Jonas that can translate text into Morse code*

- ★ Q.S.T., a radio amateur magazine, reported the case of an old shipboard radio operator who lost his ability to speak or write due to stroke and uses Morse code to communicate with his physician by blinking his eyes.

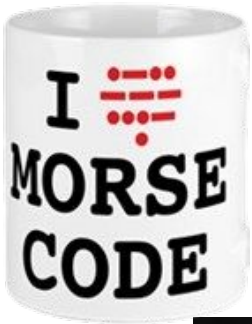


*Mnemonics for Morse code for easy learning*

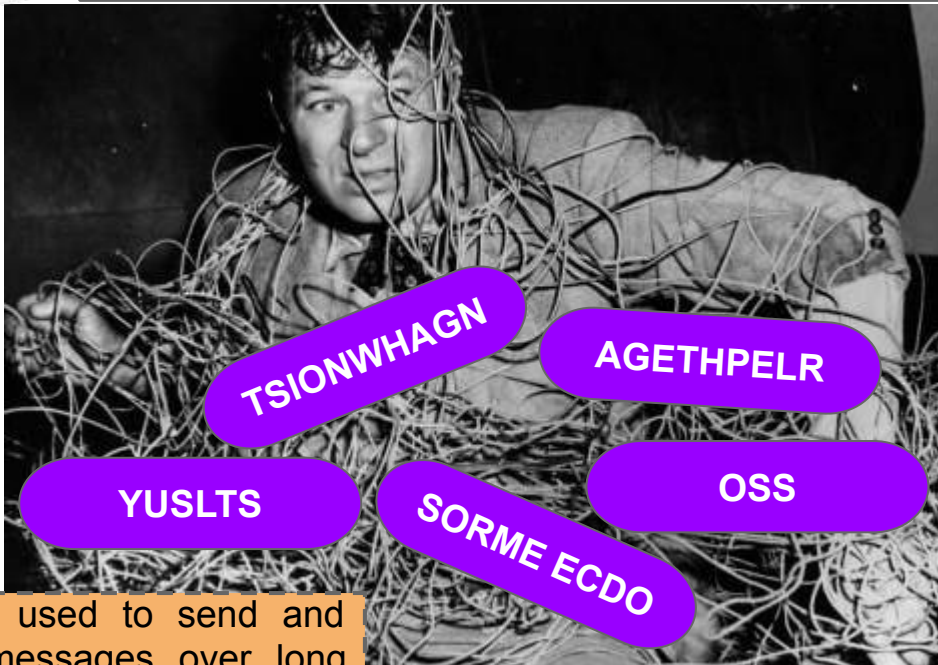


Name: \_\_\_\_\_

# Tangled Lines



Morse codes were originally transmitted through telegraph lines between stations, thus requiring long miles of lines to connect one place to another. Based on the clues given, form the right term using the jumbled letters on the word pile.



A device used to send and receive messages over long distances through electrical signals.

\_\_\_\_\_

In the original Morse telegraph system, the message is indented on a paper tape by a \_\_\_\_\_.

\_\_\_\_\_

A communication scheme that encodes the alphabet as dots and dashes.

\_\_\_\_\_

Samuel Morse's first telegraph message was sent from \_\_\_\_\_, D.C. to Baltimore, Maryland.

\_\_\_\_\_

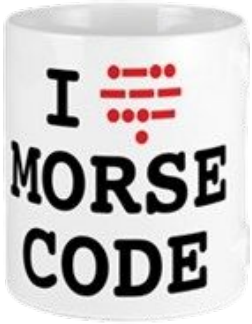
A maritime distress signal first adopted by the German government in April 1, 1905.

\_\_\_\_\_

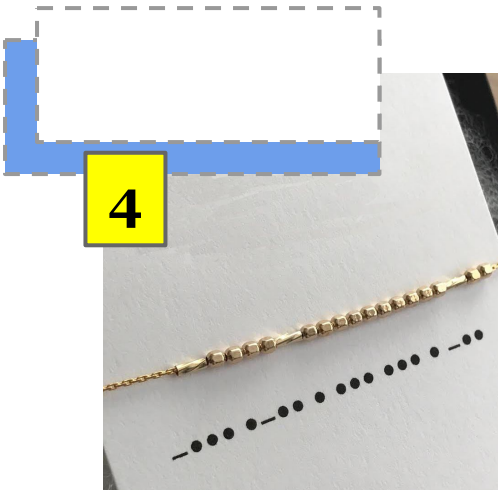
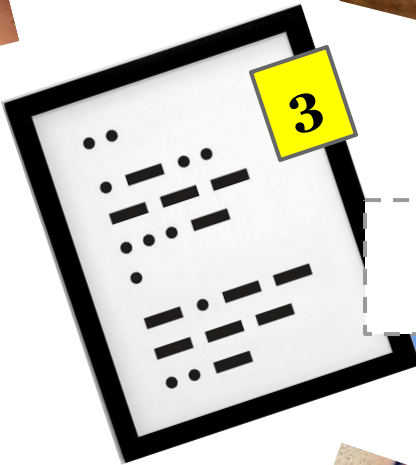
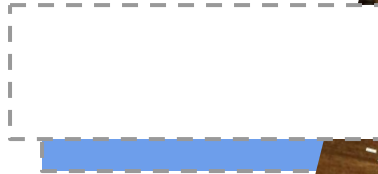


Name: \_\_\_\_\_

# Get the Message



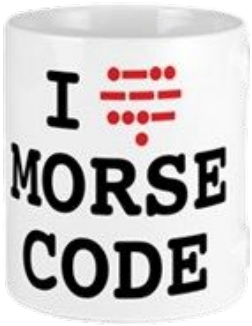
Although Morse code is now rarely used in communication, the code is still used in various ways like tattoos, art, and by some naval and radio operators. Decode the Morse code shown on the pictures below.



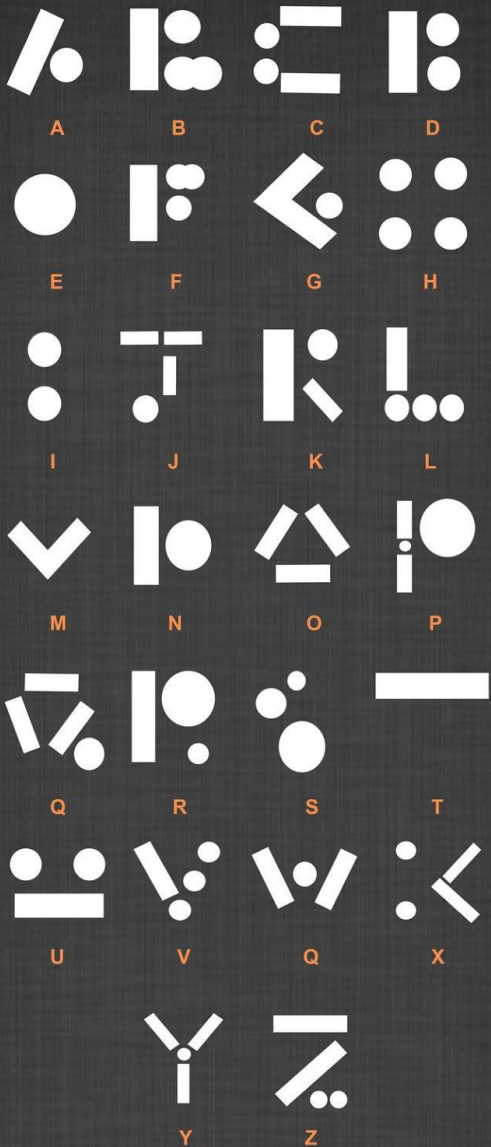


Name: \_\_\_\_\_

# Historical Code



By 1850, 12,000 miles of telegraph lines were laid out across the United States enabling public use of the technology. Answer the following questions by reading more about the development of Morse code.



What motivated Samuel Morse to make his own telegraph and communication system?

---

---

---

---

How did Alfred Vail come up with the representations for the Morse code alphabet?

---

---

---

---

What was Samuel Morse's first telegraph message?

---

---

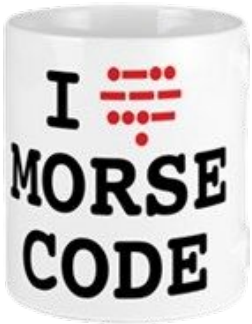
---

---



Name: \_\_\_\_\_

# Dated Codes



Morse code was swiftly accepted as a new way of sending information quickly even to distant places. Given the events below, answer with the corresponding year of when that event happened.

YEAR

Samuel Morse and Alfred Vail developed the first version of the Morse code.

The U.S. Navy sent Morse code from an airplane as a trial for the code.

The first International Radiotelegraph Convention produced an agreement about the use of SOS as the standard maritime signal for distress.

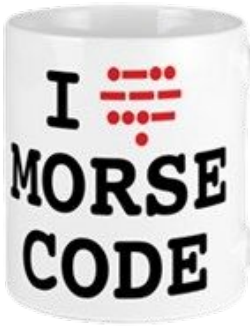
Charles Lindbergh used Morse code during his famous flight from New York to Paris.

The last commercial transmission using Morse code in the United States.

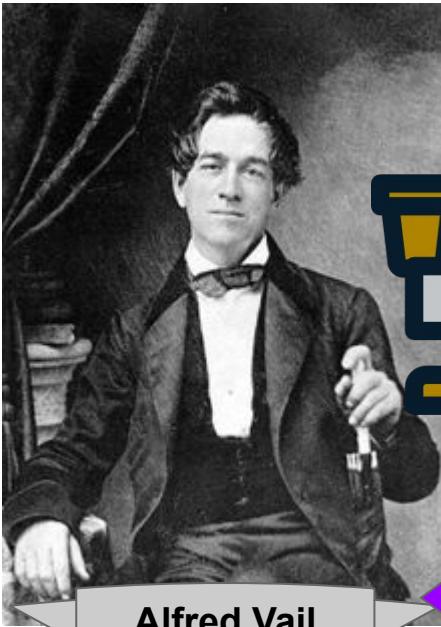


Name: \_\_\_\_\_

# Developing Code



Every innovation takes time before being completed. Samuel Morse wasn't alone in developing his telegraph system and the Morse code. List the contributions of each person on the development of the Morse code.



Alfred Vail

Profession:

---

---

Contribution to Morse code and telegraphy:

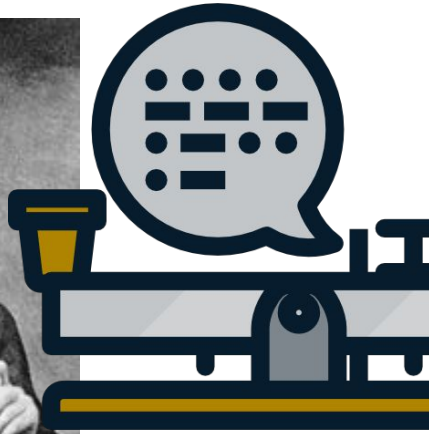
---

---

---

---

---



Profession:

---

---

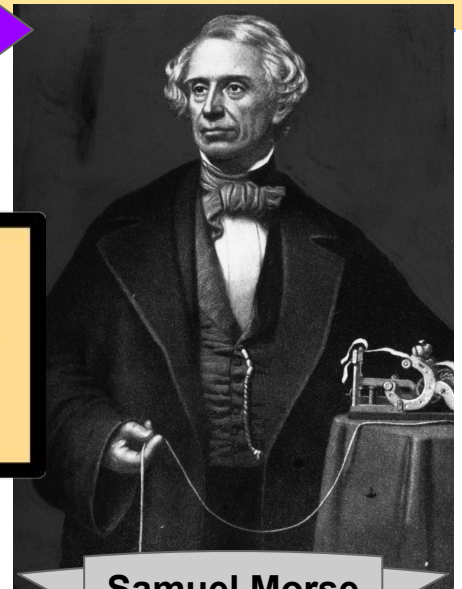
Contribution to Morse code and telegraphy:

---

---

---

---

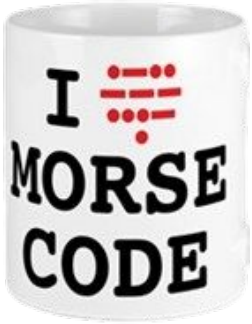


Samuel Morse



Name: \_\_\_\_\_

# A Quote of Code



Use the Morse code chart below to decipher the message. A smiley is a dot while a heart is a dash and a star is a space. You can also write a secret message to your teacher if you want.

☠️ 😊 ☠️ ☠️    ☠️ ☠️ ☠️    😊 😊 ☠️

😊 ☠️    😊 ☠️ 😊 😊    😊 ☠️ ☠️    😊 ☠️    ☠️ 😊 ☠️ ☠️    😊 😊 😊

😊 ☠️ ☠️ 😊    😊 ☠️    😊 😊 😊    😊 😊 😊

😊 😊 ☠️ 😊    😊 ☠️    😊 😊    😊 ☠️ 😊 😊    😊 😊 ☠️    😊 ☠️ 😊    😊

☠️ ☠️ ☠️    😊 ☠️

☠️    😊 😊 😊 😊    😊

😊 ☠️ ☠️    😊 ☠️    ☠️ 😊 ☠️ ☠️

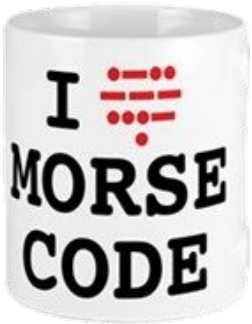
☠️    ☠️ ☠️ ☠️

😊 😊 😊    😊 😊 ☠️    ☠️ 😊 ☠️ 😊    ☠️ ☠️ ☠️ ☠️    😊    😊 😊 😊    😊 😊 😊

A	• —	N	— •
B	— •••	O	— — —
C	— • — •	P	• — — •
D	— •••	Q	— — • —
E	•	R	• — •
F	••• —	S	••••
G	— — •	T	—
H	••••	U	• • —
I	••	V	••• —
J	• — — —	W	• — —
K	— • —	X	— •• —
L	• — ••	Y	— • — —
M	— —	Z	— — ••



# A Quote of Code



## ANSWER KEY

❤️ 😊 ❤️ ❤️    ❤️ ❤️ ❤️    😊 😊 ❤️  
 😊 ❤️    😊 ❤️ 😊 😊    😊 ❤️ ❤️    😊 ❤️    ❤️ 😊 ❤️ ❤️    😊 😊 😊  
 😊 ❤️ ❤️ 😊    😊 ❤️    😊 😊 😊    😊 😊 😊  
 😊 😊 ❤️ 😊    😊 ❤️    😊 😊    😊 ❤️ 😊 😊    😊 😊 ❤️    😊 ❤️ 😊    😊  
 ❤️ ❤️ ❤️    😊 ❤️  
 ❤️    😊 😊 😊 😊    😊  
 😊 ❤️ ❤️    😊 ❤️    ❤️ 😊 ❤️ ❤️  
 ❤️    ❤️ ❤️ ❤️  
 😊 😊 😊    😊 😊 ❤️    ❤️ 😊 ❤️ 😊    ❤️ 😊 ❤️ 😊    😊    😊 😊 😊    😊 😊 😊

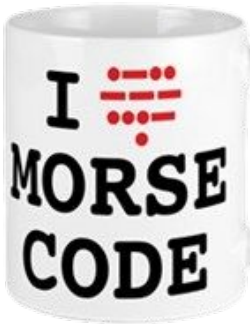
"YOU ALWAYS PASS  
 FAILURE ON THE WAY  
 TO SUCCESS"  
 -Mickey Rooney

A	• —	N	— •
B	— •••	O	— — —
C	— • — •	P	• — — •
D	— •••	Q	— — • —
E	•	R	• — •
F	••• —	S	••••
G	— — •	T	—
H	••••	U	• • —
I	••	V	••• —
J	• — — —	W	• — —
K	— • —	X	— •• —
L	• — ••	Y	— • — —
M	— —	Z	— — ••

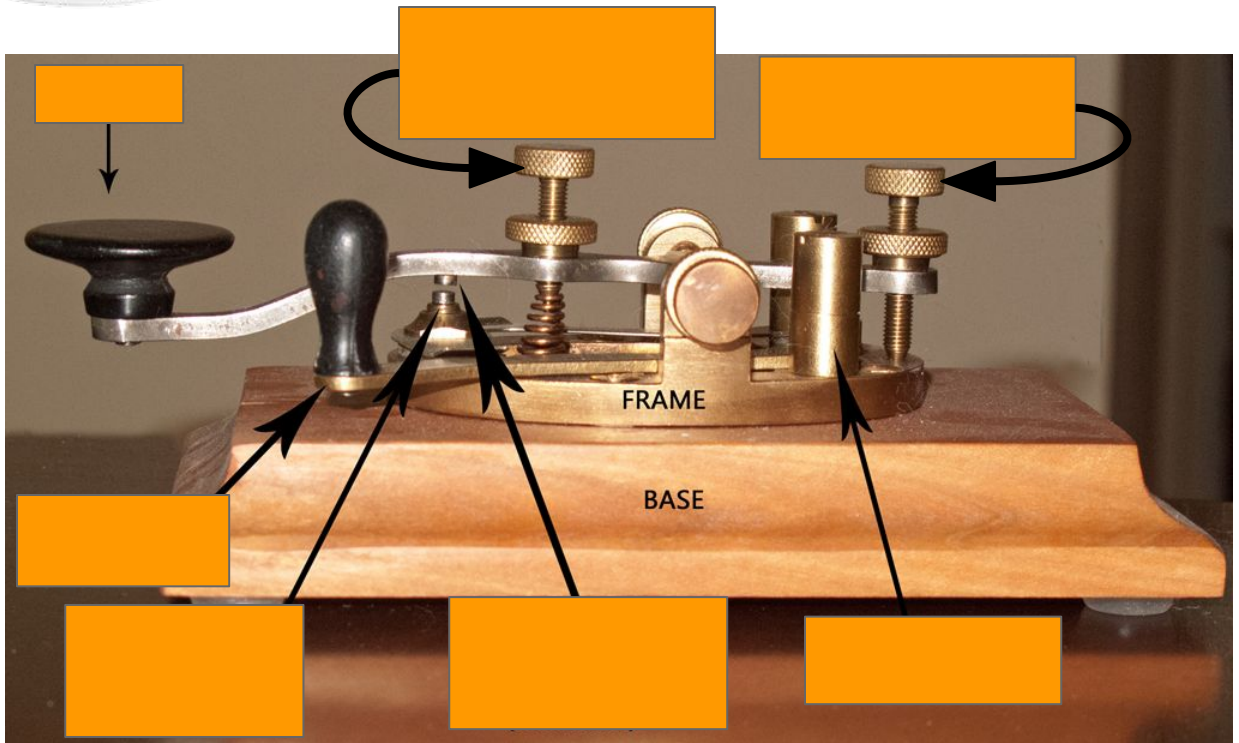


Name: \_\_\_\_\_

# The Key to the Code



Samuel Morse's telegraph system consists of a telegraph key used to spell out Morse code and a receiver with an armature that marks the code on paper. Label the parts of the telegraph key below and write a short description on its purpose.



USED FOR

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

HOW TO USE

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

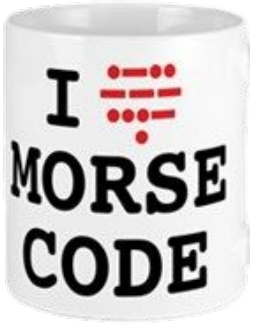
Telegraph Key

INVENTED BY ALFRED VAIL FOR THE 1844 MORSE CODE DEMONSTRATION IN WASHINGTON



Name: \_\_\_\_\_

# Modes and Codes



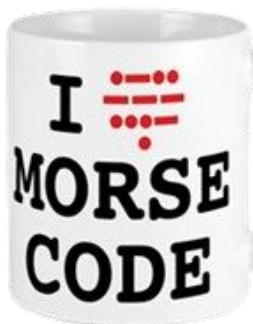
Morse code can be used in various ways for communicating. Draw or search for pictures depicting a mode of transmission for Morse code. Identify each.

A worksheet grid for identifying Morse code transmission modes. The grid consists of six dashed purple rectangular boxes arranged in a 3x2 pattern. Each box contains a blue icon of a picture with a white circle and a white mountain range. To the right of each box is a label with a colored circle and a yellow or green rectangular tail with three horizontal lines for writing. The labels alternate in color: yellow, green, yellow, green, yellow, green from top-left to bottom-right.



Name: \_\_\_\_\_

# Morse Helped Me



The Morse code SOS is still used by the public to indicate a crisis. Morse code can also be used to send encrypted messages just by blinking your eyes. Write a story about a situation where Morse code can be helpful in sending messages.



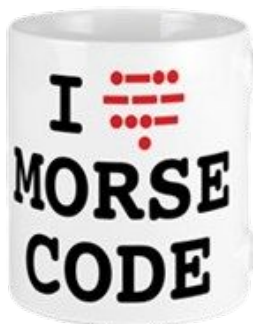
A large yellow rounded rectangle with horizontal lines, intended for writing a story.





Name: \_\_\_\_\_

# Code Name Code



Think of a unique code name that you want for yourself. Write it in Morse code below. The teacher will choose one student to write their Morse code on the board. Let the class decipher your code name. The code name to be deciphered in the longest time shall receive extra credit.

(Your Code Name Here)



YOUR  
SELFIE

Morse code for your code  
name here

TOP  
SECRET



TIME IT TOOK TO  
DECODE YOUR CODE  
NAME:

