

4 Cipher Codes

Learning about and using cipher codes is a great activity for students for several reasons:

- Deciphering codes requires critical thinking and problem-solving skills. Students will need to use logic and creativity to figure out the hidden message. This kind of mental exercise can help students develop their analytical and problem-solving abilities.
- Many cipher codes require collaboration and communication between students. By working together to solve codes, students can learn to listen to others, share their ideas, and work together towards a common goal.
- Cipher codes often involve using vocabulary and language skills to decode messages. By learning about and using different codes, students can increase their vocabulary and practice their language skills.
- Cipher codes have a rich history and are often used in historical events. By learning about different codes and how they were used throughout history, students can become more interested in historical events and the people who shaped them.



Online Decoder and Encoder Tools

1. dcode – [Caesar Cipher](#)
2. cryptii – [Caesar Cipher](#)
3. Boxentriq – [Caesar Cipher](#)
4. Morse Decoder – [Morse Code Translator](#)
5. MorseCode.World – [Morse Code Translator](#)
6. YouTube – [Learn Morse Code in One Hour](#)
7. cryptii – [Vigenère Cipher](#)
8. dcode – [Vigenère Cipher](#)
9. Boxentriq – [Vigenère Cipher](#)
10. Daniel Felix Ritchie School of Engineering & Computer Science – [Vigenère Cipher](#)
11. dcode – [Rosicrucian Cipher](#)

Teacher Information

You will find 3 texts about how Morse Code aided people in need. Each of these texts is provided in two reading levels.



Caesar Cipher

In ancient Rome, there was a great leader named Julius Caesar. He was a brilliant military commander and a wise ruler, but he also had enemies who wanted to harm him.

One day, Caesar came up with an idea to protect his messages from his enemies. He decided to create a secret code that only he and his trusted allies could understand. This code was called the Caesar cipher.

To create the Caesar cipher, Caesar took each letter in his message and replaced it with a letter that was a certain number of positions down the alphabet. For example, if he wanted to write the letter "D," he would replace it with the letter "G" because "G" is three positions down the alphabet from "D."

Caesar used this cipher to send secret messages to his generals and other trusted advisors, and it worked perfectly. His enemies couldn't understand the messages, and Caesar's plans remained secret.

Over time, other people learned about the Caesar cipher and began using it too. They realized that by shifting the letters a different number of positions, they could create different codes that were just as secure. This led to the development of more advanced ciphers and codes, which are still used today to protect sensitive information.



Caesar Cipher

Sending coded messages during times of war has been around for centuries. Some of these ciphers are quite easy. For example, Julius Caesar’s code simply shifted the letters of the alphabet. In this example, the letters are shifted three spaces to the left.

	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		
	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓		
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	A	B	C

The shifts can change to the right or to the left. Also, the number of spaces the alphabet shifts can also be changed. This keeps the enemy from easily deciphering the message.

Using the alphabet above, decipher this message.



I U L H Q G V U R P D Q V F R X Q W U B P H Q O H Q G P H B R X U H D U V

Decoding using the Caesar Cipher

The Caesar Cipher is a simple way to encode messages so that only people who know the "secret code" can read them. Here's how it works:

First, choose a secret key. This is just a number between 1 and 26. Let's say we choose the key 3.

Next, write down your message. For example, let's say we want to encode the message "HELLO".

Now, for each letter in your message, move it forward in the alphabet by the number of letters in your key. So if your key is 3, "A" becomes "D", "B" becomes "E", and so on.

So if we apply our key of 3 to the message "HELLO", we get:

$H + 3 = K$

$E + 3 = H$

$L + 3 = O$

$L + 3 = O$

$O + 3 = R$

So the encoded message would be "KHOOR".

To decode the message, you just reverse the process. So if someone gives you the message "KHOOR" and you know the key is 3, you would move each letter back in the alphabet by 3 letters to get the original message "HELLO".

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
↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Key Shift 7 - "Aol ilhbapmbs aopun hivba slhyupun pz aoha uv vul jhu ahrl pa hdhf myvt fvb." --I.I. Rpun

Key Shift 4 - "E tivwsr als riziv qehi e qmwxeoi riziv xvmih ercxlmrk ria." --Epfix Imrwximr

Key Shift 2 - "Pgxgt ngv vjg hgct qh uvtkmkpi qwv uvqr aqw htqo ncakpi vjg icog." --Dcdg Twvj

Key Shift 9 - "Cqn fjh cx pnc bcjacnm rb cx zdrc cjutrwj jwm knprw mxrwp." --Fjuc Mrbwnh

The Story of Morse Code



An inventor and artist named Samuel Morse had a passion for communication. He lived in a world where people communicated with each other through letters and messages that took days, or even weeks, to arrive at their destination. Samuel knew that there had to be a faster way to communicate, especially in emergency situations.

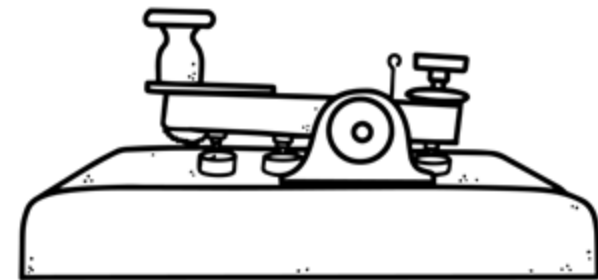
One day, while on a ship traveling from Europe to America, Samuel heard about an invention called the telegraph. The telegraph was a machine that used electricity to send messages over long distances. Samuel was fascinated by the idea and decided to work on it. He spent years experimenting and perfecting the telegraph. Finally, in 1837, he succeeded. He had invented a way to send messages using dots and dashes that he called Morse Code.

The dots and dashes in Morse Code represented letters and numbers. People could send messages by tapping out these codes on a telegraph machine. The machine would then convert the code into words and send them to the recipient. This allowed people to send messages across the country in just a matter of minutes, revolutionizing communication.

After its invention, Morse Code became an important tool for many different industries, including the military, shipping, and railroads. During the American Civil War, Morse Code was used to send messages about troop movements and supplies. This helped the Union army make important decisions. In the shipping industry, Morse Code was used to communicate between ships and shore. For railroads, it was used to send messages about train schedules and signals.

As time passed, new technologies were developed that made communication even faster and easier, but Morse Code still played a crucial role in many industries. Even today, some people still learn Morse Code. It is used in amateur radio and other forms of communication.

Samuel Morse and his invention of Morse Code is a reminder of the power of determination and hard work. Samuel never gave up on his dream, and his persistence led to an invention that changed the world forever.



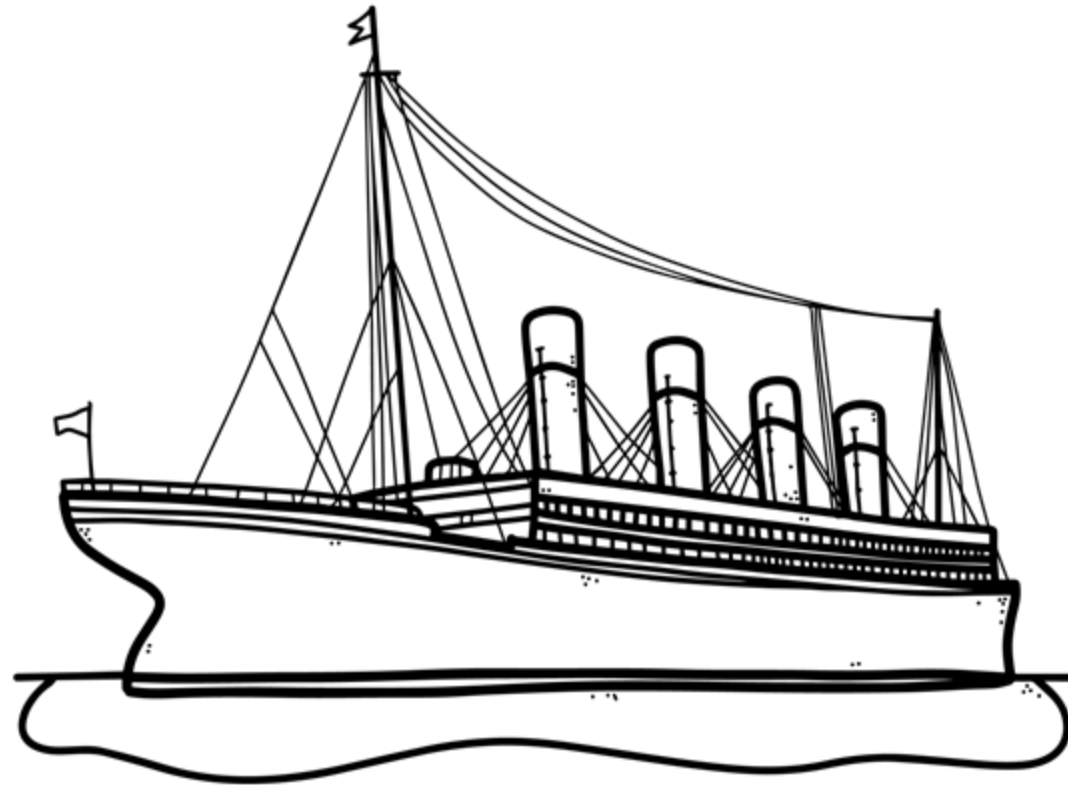
The RMS Titanic

The RMS Titanic was a big and fancy ship that sailed in 1912. It was supposed to be a happy journey for everyone on board, but it hit an iceberg and sank on its first trip. Sadly, a lot of people died because there weren't enough lifeboats for everyone.

When the Titanic started sinking, the people who worked on the ship used something called Morse code to send messages to other ships nearby. They sent a message with the letter "S" in Morse code, which meant that they were in trouble and needed help right away.

Luckily, another ship called the RMS Carpathia got the message and came to help. Even though it was far away, it got there as fast as it could and saved many people's lives.

This was one of the first times that people used Morse code to send a message for help in a big emergency like this. It showed how important it is to have a way to communicate when something bad happens. It also showed how new technology like wireless communication can be really helpful in times of trouble.



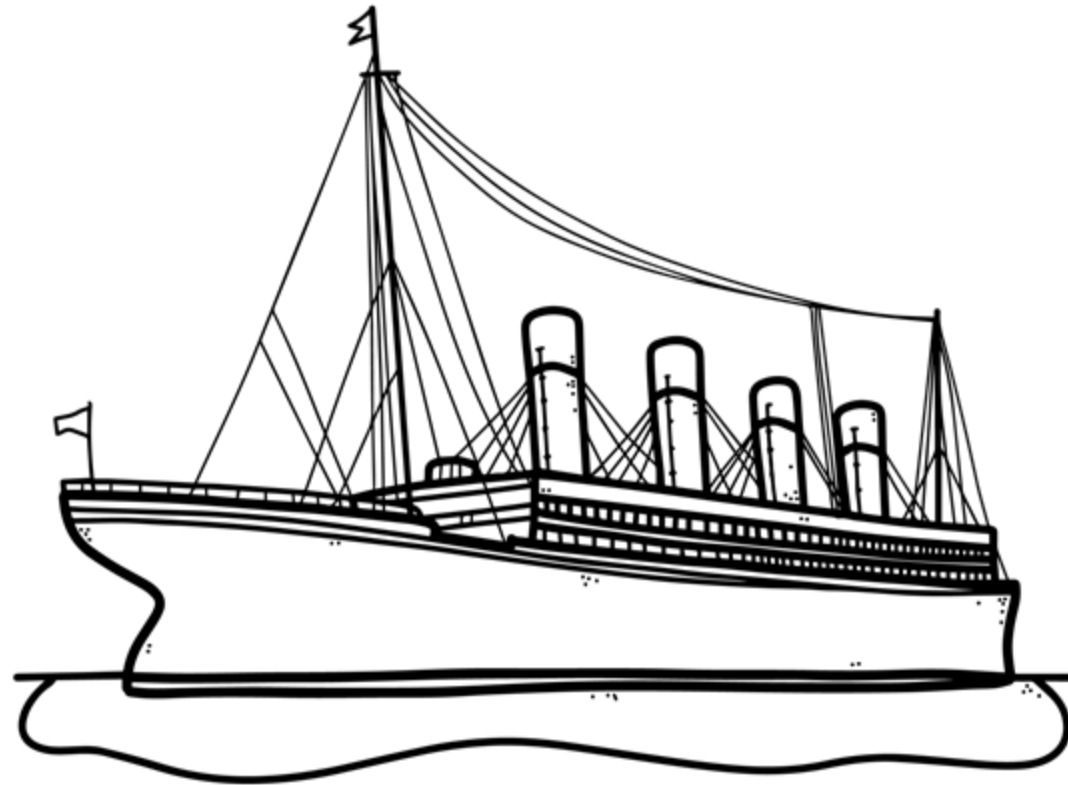
RMS Titanic

One historical event in which Morse code was used was the sinking of the RMS Titanic in 1912. The Titanic was considered to be one of the most luxurious and grand ships of its time. It struck an iceberg and sank on its maiden voyage. Many people were on board the ship, and many lives were lost.

As the ship began to sink, the crew sent out distress signals using Morse code. The nearby ship, the RMS Carpathia, received the distress signals and immediately set course to the Titanic's location. However, the Carpathia was several hours away and couldn't arrive in time to save all the passengers on the Titanic.

The distress signal sent by the Titanic's crew was the letter "S" in Morse code, which is three dots, repeated continuously. This signal was intended to indicate that the ship was in trouble and needed help right away. The signal was picked up by several ships in the area, but the Carpathia was the closest and was able to respond the quickest.

The distress signal sent by the Titanic was one of the first instances in which the international distress signal in Morse code (SOS) was used. This event showed how new technology like wireless communication can be really helpful in times of trouble.



The Battle of Midway - World War II

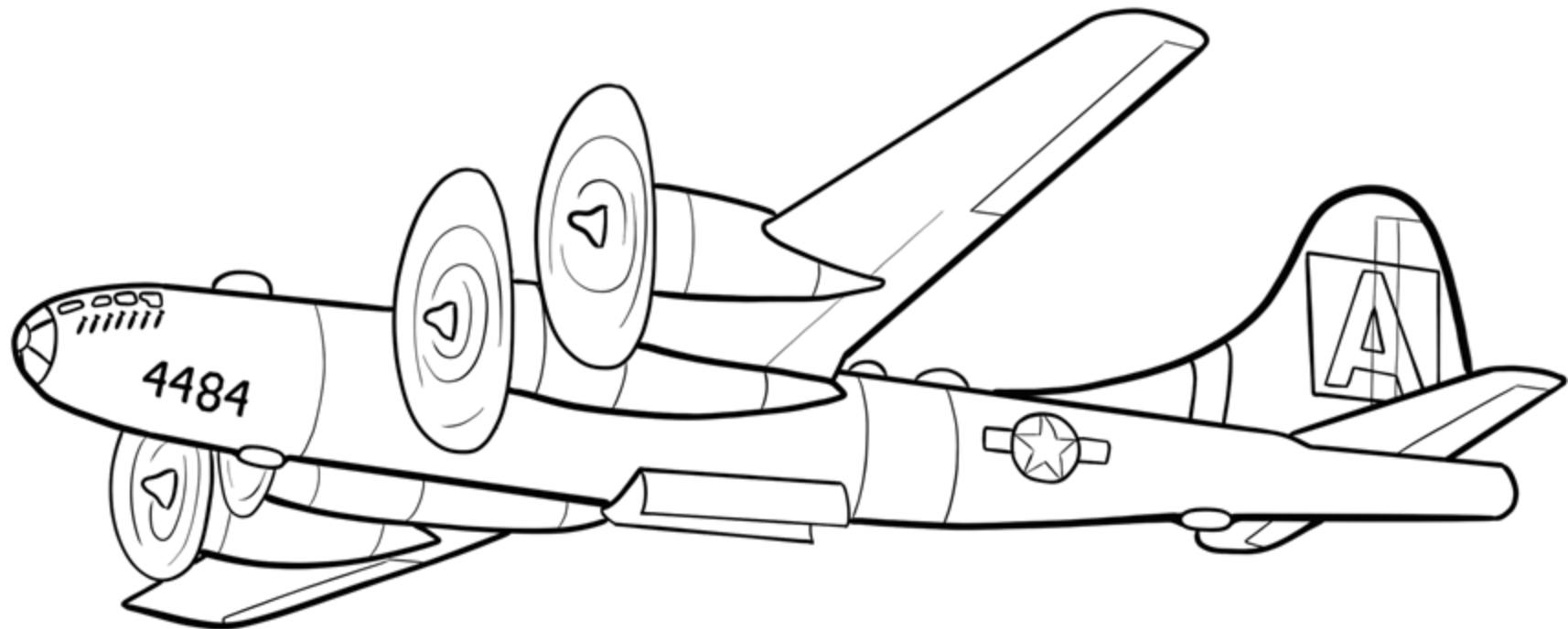
During World War II, Morse code was really important for the military to talk to each other quickly and safely. It helped them send messages between planes, ships, and different groups of soldiers.

There was a big battle called the Battle of Midway, where the United States and Japan fought each other. The United States used Morse code to figure out where the Japanese ships were and what they were planning to do.

With this information, the United States was able to surprise the Japanese and win the battle! It was a very important moment in the war.

Morse code was also used to send messages for help when things went wrong. This helped save lives in emergency situations.

Overall, Morse code was really helpful in World War II and played a big part in helping the US and their friends win the war. It reminds us how important it is to communicate well and use technology wisely.



The Battle of Midway - World War II

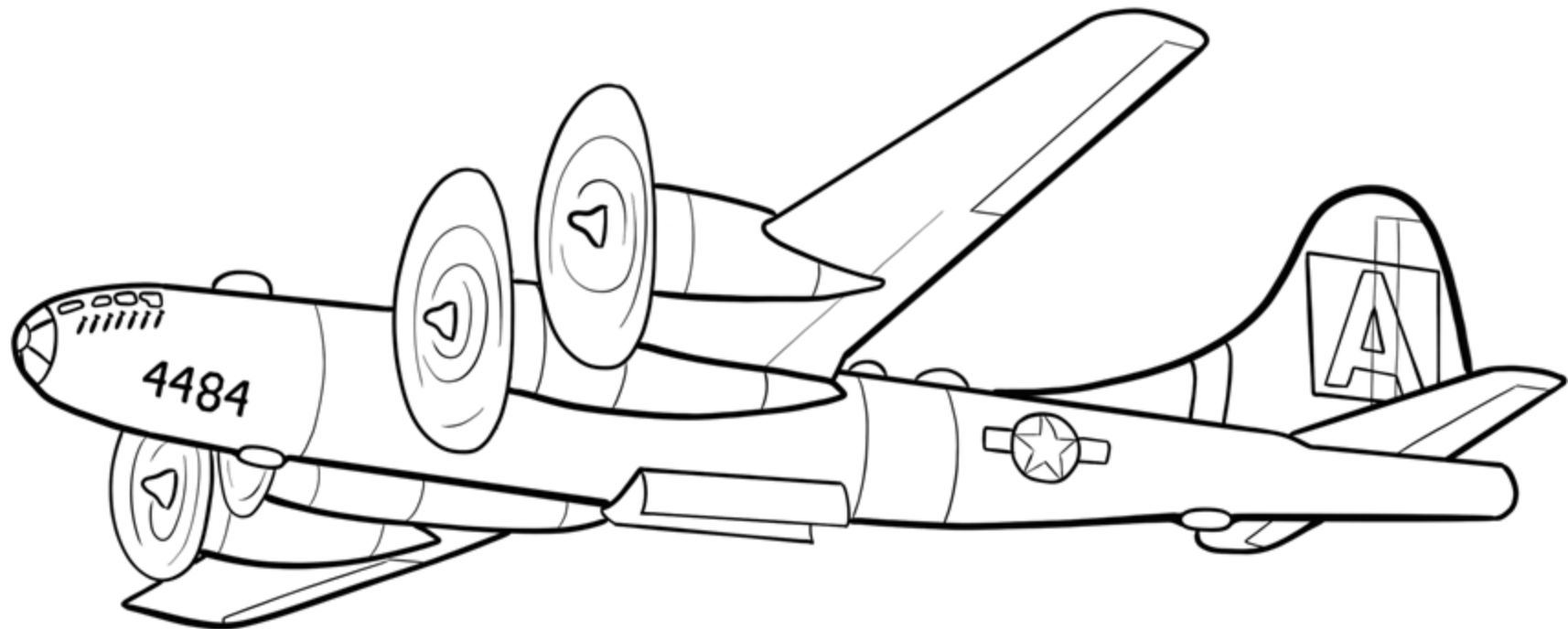
During World War II, the use of Morse code was critical for communication between military units, as well as for sending messages between ships and planes. It was an important tool for the military to share information quickly and securely.

One important story involving the use of Morse code during World War II is the Battle of Midway. The Battle of Midway was a major naval battle between the United States and Japan in 1942.

The United States was able to use Morse code to intercept and decode a message sent by the Japanese. The message provided detailed information about the Japanese fleet's plans and location. This information allowed the United States Navy to prepare and launch a surprise attack on the Japanese fleet.

Because of this surprise attack, the United States was able to defeat the Japanese Navy, which was a significant turning point in the Pacific Theater of the war. This battle is considered one of the most important battles of World War II, and it was made possible in part by the use of Morse code.

Morse code was also used to send messages for help when things went wrong. This helped save lives in emergency situations.

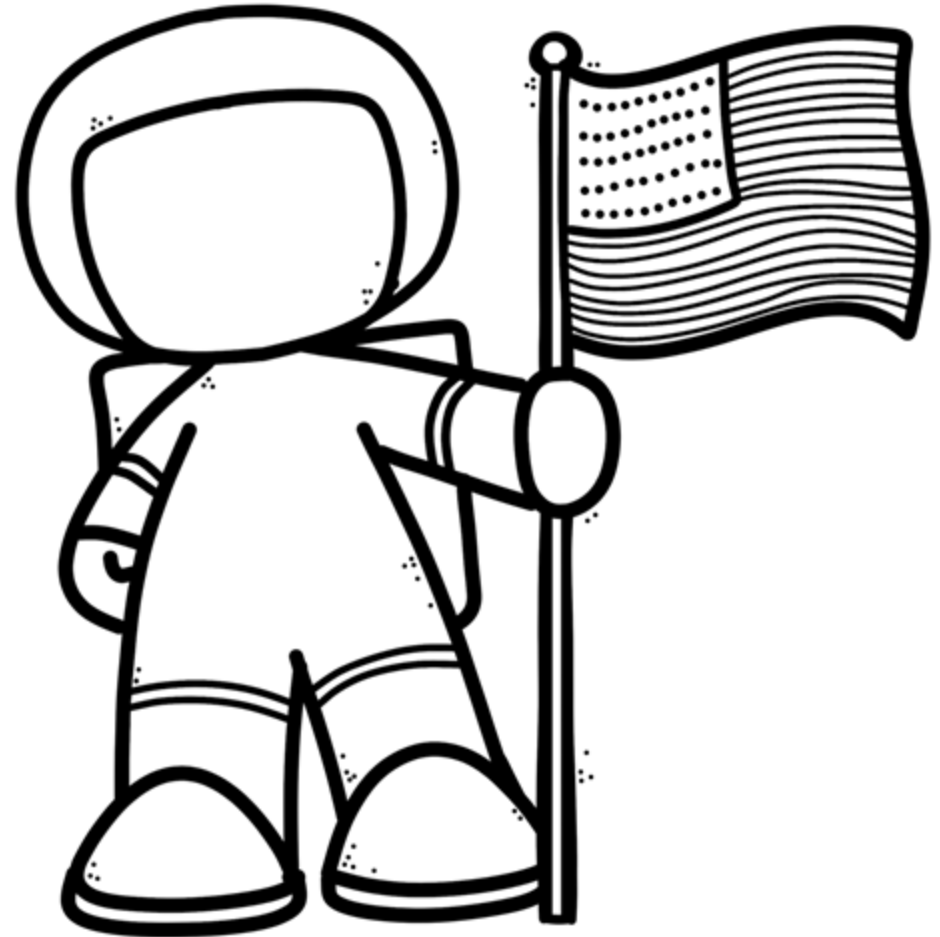


Apollo 11

The Apollo 11 mission was a really big deal because it was the first time people went to the Moon! But, when the Eagle module was landing, they had a problem with the guidance system and they were running out of fuel. The pilot, Neil Armstrong, had to land the Eagle manually instead.

But, they were still able to talk to the people in Houston who were helping them using Morse code! They sent a message that said "1202" which told Houston that there was a problem with the guidance system.

Using Morse code was really important because they were so far away from Earth and it took a long time for messages to travel back and forth. But, Morse code was a fast and reliable way to talk to each other and solve problems. It's really cool to see how technology has changed, but some things, like Morse code, are still useful!



Apollo 11

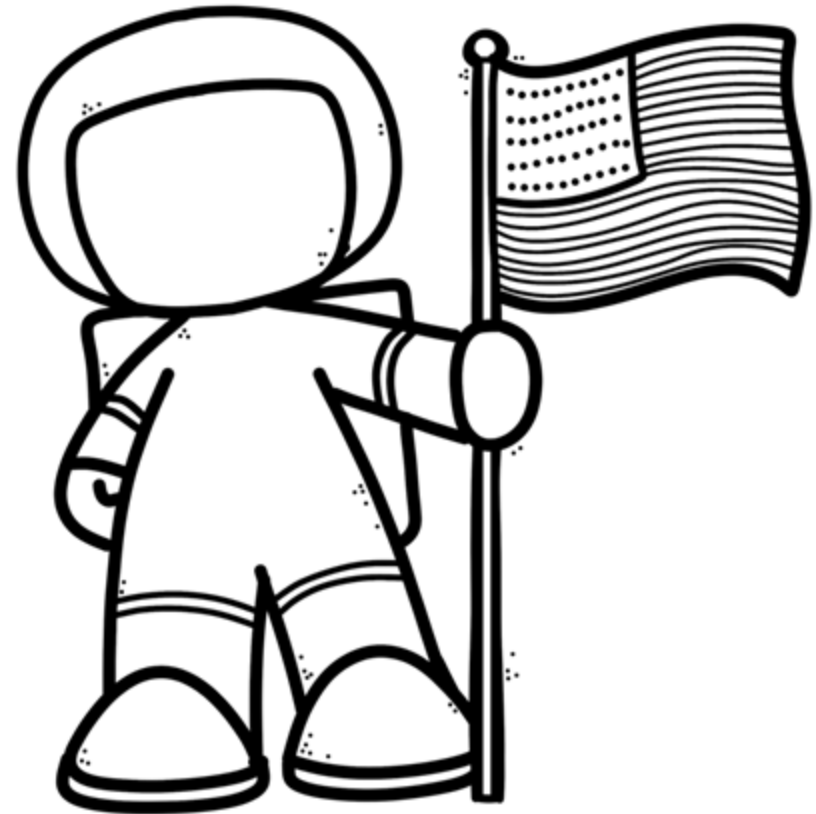
The Apollo 11 mission was a very important event in human history. It was the first time that people went to the moon and landed there safely.

As the Apollo 11 spacecraft was descending to the surface of the Moon, the Eagle lunar module was having trouble with its guidance system and was running low on fuel. The Eagle was sending back information through wireless data to the Mission Control Center in Houston, Texas. Because of the distance and time delay, the data was being received in Morse code.

The guidance system problem was caused by a malfunction in the Eagle's radar system. The radar was responsible for measuring the altitude of the spacecraft above the lunar surface. The radar system was sending incorrect data to the guidance computer, which was causing the Eagle to descend too quickly.

After sending a Morse code message to the Mission Control Center in Houston, Texas, that simply said "1202" which was an alarm code indicating an error in the guidance system, the Eagle's pilot, Neil Armstrong, was able to manually take control of the lunar module and safely land the Eagle on the lunar surface.

The use of Morse code in the Apollo 11 mission highlights the importance of this method of communication in space exploration. The ability to quickly and accurately transmit and decode messages allowed the mission control team to understand the problem and work on a solution which ensured the success of the mission.

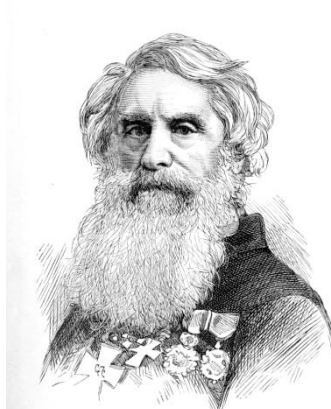


Morse Code

Morse Code was invented by Samuel Morse and Alfred Vail. It uses a series of long and short pulses. A dot equals one short pulse (x) called a dit. The dashes are equal in length to three dots (3x). They are called dahs. The space between each letter is equal to a dash (3x). The space between words is equal to seven dots (7x).

Samuel Morse and Alfred Vail developed the code for the telegraph machine. A telegraph operator would sit at the machine and tap out long and short taps to represent the letters in the message he was sending.

Decode this secret message. Letters are separated by spaces and words by slashes /.



Samuel Morse

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	• • • • —
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6	— • • • •
7	— — • • •
8	— — — • •
9	— — — — •
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Practice with Morse Code

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[illegible]

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Gary Miller © Book Units Today

The Story of Blaise de Vigenère

In the 16th century, there lived a French cryptographer named Blaise de Vigenère. He was fascinated by the art of secret communication and was always looking for ways to improve it. At that time, the most popular method of secret communication was the Caesar Cipher. But, this method had a major weakness. If someone figured out the shift used, they could easily decode the message.

Blaise de Vigenère wanted to create a cipher that was much more secure and couldn't be easily decoded. He worked on this idea for many years and finally came up with the Vigenère Cipher. This cipher used a table of alphabets and a secret keyword to encrypt a message. The message was encrypted by using a different alphabet from the table for each letter in the keyword. This made it much more difficult for someone to decode the message.

The Vigenère Cipher quickly became popular and was used by many people to communicate secret messages. It was especially popular among military leaders and diplomats. They used it to send important messages to each other without the fear of someone intercepting and decoding the message.

Years passed, and the Vigenère Cipher remained one of the most popular and secure methods of secret communication. It was eventually used in many other fields, such as medicine and science. Researchers used it to protect their findings and communicate sensitive information securely.

Today, the Vigenère Cipher is still studied in cryptography and is considered an important part of the history of secret communication. It has inspired many other methods of encryption and is still used in some modern-day communication systems.



Vigenère Cipher

The Vigenère Cipher was invented by Giovan Battista Bellaso in 1553. It uses a table consisting of 26 alphabetized letters across and 27 letters down. To use this code, you must first know the secret phrase.

During the American Civil War the secret phrases included:

- Manchester Bluff
- Complete Victory
- Come Retribution

Using the phrase “Manchester Bluff,” this is how you would code the word “Jackson.”

You would first put your pointer finger of your right hand on the M in the top row of letters because Manchester Bluff begins with ‘M.’

Next, you would then put your pointer finger from your left hand on the letter J in the first column of letters because Jackson begins with the letter ‘J.’

Slide your fingers together staying on the row and column. Where your fingers meet, is the letter you would write down in your secret message. For J the letter is ‘V.’

By following this process, the word “Jackson” would read as “VAPMZSF.”

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

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

Vigenère Cipher

Decode this interesting fact
using the Vigenère Cipher.

Secret Key is ----
interestingfact



Vigenère Cipher

Decode these quotes using the Vigenère Cipher.



Nsl'd pcd cccxcbhyi xyui sz xmy qsml mp xmnew.

— Key: WILLROGERS

Sj wyy ybi uyvisre yr qyqcdlgxk rrer iss biyvpw mepo ezyyr, iss nsl'd lyfi ry fc zyqrib. Dlc fmqssl ziyvw wyy.

— Key: STEVEJOBS

Dejorr gmlc kywiq, lyr diywambo yxh gxxcvpgqilmi usr arekzmmxwfstq.

— Key: MICHAELJORDAN

Vmdo mq vmio vgnmlq e zsgwmpc. Ds ioin issb fyvelmi wyy kewr uicz qmfmlq.

— Key: ALBERTEINSTEIN

Christian Rosenkreuz



A brilliant man named Christian Rosenkreuz lived in the 1400s. He was fascinated by codes and secret messages, and he spent much of his life studying the art of cryptography.

One day, Christian had an idea for a new kind of cipher, one that would be more secure than any that had been created before. He worked tirelessly on his invention. After many long hours, he finally succeeded in creating a cipher that he called the Rosicrucian Cipher.

The Rosicrucian Cipher was a simple but effective system of cryptography. It used a table of symbols, each representing a letter of the alphabet, to encrypt messages. To decipher a message, the recipient would need to know the symbols that matched the letters. This made the Rosicrucian Cipher much more secure than other ciphers of its time.

Christian was very proud of his invention, and he used it to send secret messages to other members of the Rosicrucian Order, a secret society that he had founded. The Rosicrucians used the cipher to communicate with each other about their secret beliefs and practices, and to share knowledge and wisdom that they had gained from their studies.

The Rosicrucian Cipher was used for many years by the Rosicrucians. It remained a closely guarded secret for centuries. However, over time, the cipher was eventually discovered by others, and it became widely known and used throughout Europe.

Rosicrucian Cipher

The Rosicrucian (also known as the Pigpen Cipher) was first published in 1531 by both the Rosicrucian brotherhood and the Freemasons.

It uses a geometric simple substitution cipher. Each letter is placed on a grid or an X. When the second grid and X are used it is accompanied by a dot.

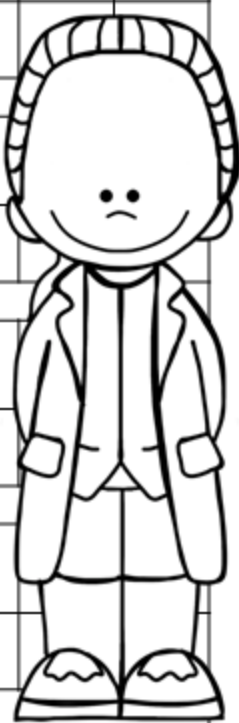
To use the code, swap out the shape the letter sits in for the letter. The chart shows the shapes of the letters.

Decipher the coded message on the next page to learn an interesting spy fact.

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

S	W
T	X
U	Y
V	Z

a	b	c	d	e	f	g	h	i
J	U	L	C	O	E	T	N	R
j	k	l	m	n	o	p	q	r
J.	U.	L.	C.	O.	E.	T.	N.	R.
s	t	u	v	w	x	y	z	
V	>	<	^	v	>	<	^.	

[illegible]

Answer Keys

Caesar Cipher Answer Key

Sending coded messages during times of war has been around for centuries. Some of these ciphers are quite easy. For example, Julius Caesar's code simply shifted the letters of the alphabet. In this example, the letters are shifted three spaces to the left.

	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		
	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓		
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	A	B	C

The number of shifts can change to the right or to the left. Also, the number of spaces the alphabet shifts can also be changed. This keeps the enemy from easily deciphering the message.

Using the alphabet above, decipher this message.



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

Decoding using the Caesar Cipher Answer Key

The Caesar Cipher is a simple way to encode messages so that only people who know the "secret code" can read them. Here's how it works:

First, choose a secret key. This is just a number between 1 and 26. Let's say we choose the key 3.

Next, write down your message. For example, let's say we want to encode the message "HELLO".

Now, for each letter in your message, move it forward in the alphabet by the number of letters in your key. So if your key is 3, "A" becomes "D", "B" becomes "E", and so on.

So if we apply our key of 3 to the message "HELLO", we get:

H + 3 = K

E + 3 = H

L + 3 = O

L + 3 = O

O + 3 = R

So the encoded message would be "KHOOR".

To decode the message, you just reverse the process. So if someone gives you the message "KHOOR" and you know the key is 3, you would move each letter back in the alphabet by 3 letters to get the original message "HELLO".

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
↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Key Shift 7 - "Aol ilhbapmbs aopun hivba slhyupun pz aoha uv vul jhu ahrl pa hdhf myvt fvb." --I.I. Rpun

"The beautiful thing about learning is that no one can take it away from you." —B.B. King

Key Shift 4 - "E tivwsr als riziv qehi e qmwxeoi riziv xvmih ercxlmrk ria." --Epfix Imrwximr

"A person who never made a mistake never tried anything new." —Albert Einstein

Key Shift 2 - "Pgxtg ngv vjg hgct qh uvtkmkpi qwv uvqr aqw htqo rncakpi vjg icog." --Dcdg Twvj

"Never let the fear of striking out stop you from playing the game." —Babe Ruth

Key Shift 9 - "Cqn fjh cx pnc bcjacnm rb cx zdrc cjutrwp jwm knprw mxrwp." --Fjuc Mrbwnh

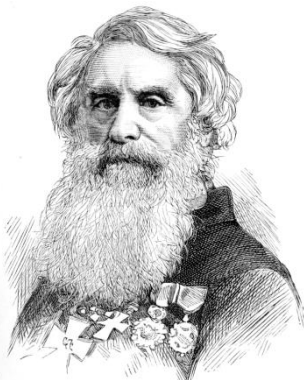
"The way to get started is to quit talking and begin doing." —Walt Disney

Morse Code Answer Key

Morse Code was invented by Samuel Morse and Alfred Vail. It uses a series of long and short pulses. A dot equals one short pulse (x) called a dit. The dashes are equal in length to three dots (3x). They are called dahs. The space between each letter is equal to a dash (3x). The space between words is equal to seven dots (7x).

Samuel Morse and Alfred Vail developed the code for the telegraph machine. A telegraph operator would sit at the machine and tap out long and short taps to represent the letters in the message he was sending.

Decode this secret message. Letters are separated by spaces and words by slashes /.



Samuel Morse

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

- -... . / -... . - - / - - / ... - . - - / . - / - /
-... . . - - / - - ... / - -

The battle will start at the break of dawn.

Practice with Morse Code Answer Key

.. / ..-. .. -. -.. / -- - / - /- .-. -.. .-. / .. / .-- --- .-. -.- ---
- / - / -- --- .-. . / .-. ..- -. -.- / .. / - / - --- /- ...- .-.
/ # - --- -- .- ... / .--- .-. .-. .-. .-. --- -.

"I find that the harder I work, the more luck I seem to have." – Thomas Jefferson

- / ..-. ..- - ..- .-. . / -.... --- - . -.- ... / - --- / - --- / .--
--- / -.... . .-. .. . --- . / .. -. / - / -.... . .- ..- - .-- / --- ..-. / - -.
/ -.. .-. .- ---.-. # / # .-. .. .- -. --- .-. / .-. --- --- --- -

"The future belongs to those who believe in the beauty of their dreams." — Eleanor Roosevelt

-.-- --- ..- / .- .-. . / -.... .-. .- ...- . .-. / -- -. / -.-- --- ..- / -.... . .-. .. .
...- . ---..- / ... - .-. --- - .-. . .-. / -- -. / -.-- --- ..- / - / .- -. -.
/ ... -- .- .-. - .-. / -- -. / -.-- --- ..- / -- .-. .-.-. # / # .- .-.-.
. - .-.-. / -- .. .-. - .

"You are braver than you believe, stronger than you seem and smarter than you think." — A.A. Milne

..-. - / -- --- .-. . / -- - / -.-- --- ..- / .-. .- -. ---..- / - / --
--- .-. . / - -. -.- ... / -.-- --- ..- / .-- / -.-- --- .-- ---..- / -
.... . / -- --- .-. . / -- - / -.-- --- ..- / .-. .- .-. -.-..- / - / -- ---
.-. / -.-- .-. .- -. -. / -.-- --- ..- # .-. .-. / -- --- .-.-. # / # -. .-. .-.
/ - ...

"The more that you read, the more things you will know, the more that you learn, the more places you'll go." — Dr. Seuss

Vigenère Cipher Answer Key

Decode this interesting fact using the Vigenère Cipher.

Secret Key is ----
interestingfact



Vigenère Cipher

Decode these quotes using the Vigenère Cipher.



Nsl'd pcd cccxcbhyi xyui sz xmy qsmi mp xmnew.
— Key: WILLROGERS

Don't let yesterday take up too much of today.

Sj wyy ybi uyvisre yr qyqcdlgxk rrer iss biyvpw mepo ezyyr, iss nsl'd lyfi ry fc zyqrib. Dlc fmqssl zyjvw wyy.
— Key: STEVEJOBS

If you are working on something that you really care about, you don't have to be pushed. The vision pulls you.

Dejorr gmlc kywiiq, lyr diywambo yxh gxxcvpgqilmi usr arekzmmxwfstq.
— Key: MICHAELJORDAN

Talent wins games, but teamwork and intelligence win championships.

Vmdo mq vmio vgnmlq e zsgwmpc. Ds ioin issb fyvelmi wyy kewr uicz qmfmlq.
— Key: ALBERTEINSTEIN

Life is like riding a bicycle. To keep your balance you must keep moving.

>	⌋	□		◻	◻	∨	>		□	⌋	◻	◻	<	∨		∨	◻	<			
T	H	E		M	O	S	T		F	A	M	O	U	S		S	P	Y			
∨	⌋	∨		◻	⌋	>	⌋	⌋	◻		⌋	⌋	◻	□		∨	⌋	◻			
W	A	S		N	A	T	H	A	N		H	A	L	E		W	H	O			
∨	⌋	∨		⌋	⌋	◻	⌋	□	□		◻	◻									
W	A	S		H	A	N	G	E	D		O	N									
∨	□	◻	>	□	◻	⌋	□	◻		2	2	,		1	7	7	6	.			
S	E	P	T	E	M	B	E	R		2	2	,		1	7	7	6	.			
⌋	⌋	∨		◻	⌋	∨	>		∨	◻	◻	□	∨		∨	□	◻	□			
H	I	S		L	A	S	T		W	O	R	D	S		W	E	R	E	,		
⌋		◻	□	⌋	◻	□	>		>	⌋	⌋	>		⌋		⌋	⌋	^	□		
I		R	E	G	R	E	T		T	H	A	T		I		H	A	V	E		
⌋	<	>		◻	◻	□		◻	⌋	□	□		>	◻		◻	◻	∨	□		
B	U	T		O	N	E		L	I	F	E		T	O		L	O	S	E		
□	◻	◻		◻	<			⌋	◻	<	◻	>	◻	<							
F	O	R		M	Y			C	O	U	N	T	R	Y	.						





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