



# CIPHER WORKSHEETS

## PIGPEN CIPHER

The Pigpen Cipher is an example of a substitution cipher in which the letters are replaced by symbols. The cipher has an interesting history: although its true origins are unknown, it has been used by many groups. Most notoriously, it was the cipher of choice for use by the Freemasons, a secret society in the 18th Century. In fact, they used it so much, that it is often referred to as the Freemasons Cipher. However, it was not exclusively used by them, with Union prisoners in Confederate camps using it to communicate in the American Civil War.

(Definition from [crypto.interactive-maths.com](http://crypto.interactive-maths.com))

<b>A</b>	<b>B</b>	<b>C</b>
<b>D</b>	<b>E</b>	<b>F</b>
<b>G</b>	<b>H</b>	<b>I</b>

<b>J</b> .	<b>K</b> .	<b>L</b> .
<b>M</b> .	<b>N</b> .	<b>O</b> .
<b>P</b> .	<b>Q</b> .	<b>R</b> .

<del><b>S</b></del>	
<del><b>T</b></del>	<del><b>U</b></del>
<del><b>V</b></del>	

<del><b>W</b></del>	
<del><b>X</b></del>	<del><b>Y</b></del>
<del><b>Z</b></del>	

**EXAMPLE:**

L F 7 n o f v

J f o v e

L e e l

**YOUR TURN!**



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## DANCING MEN CIPHER

Dancing Men cipher was invented by Sir Arthur Conan Doyle and appeared in his story "The Adventure of the Dancing Men". In this story, Sherlock Holmes discovers that the dancing figures is a secret cipher and cracks the code. The story doesn't cover all letters, but the alphabet was completed by Aage Rieck Sørensen, who also added numerals.  
(Definition from [www.boxentriq.com](http://www.boxentriq.com))

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			

### EXAMPLE:



### YOUR TURN!



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## MORSE CODE

Morse code is a type of code that is used to send telegraphic information using rhythm. Morse code uses dots and dashes to show the alphabet letters, numbers, more. Morse code is named after Samuel Morse, who helped invent it. Some people still use Morse code to communicate on amateur radio. (Definition from kids.kiddle.co)

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 ■ ■ ■ ■ ■

### EXAMPLE:

— ● ● ● ● ● ● ● ● ● ●

● ● ● ● ●

● ● — ● ● — — ●

### YOUR TURN!



# CIPHER WORKSHEETS

## NATO PHONETIC ALPHABET

The NATO Phonetic Alphabet is a way of using words to replace letters. The first letter of the word is the letter the word stands for. First used primarily by military servicemen and women, several different spelling alphabets came in and out of use in the early twentieth century, when poor signal and radio interference of early AM radio technology was known to cause errors in communication. Flight associations started using code words to represent letters that were easily confused or misheard. There was a specific word that corresponded to each letter.  
(Definition from [www.sporcle.com](http://www.sporcle.com))

<b>A</b> Alpha	<b>B</b> Bravo	<b>C</b> Charlie	<b>D</b> Delta	<b>E</b> Echo
<b>F</b> Foxtrot	<b>G</b> Golf	<b>H</b> Hotel	<b>I</b> India	<b>J</b> Juliet
<b>K</b> Kilo	<b>L</b> Lima	<b>M</b> Mike	<b>N</b> November	<b>O</b> Oscar
<b>P</b> Papa	<b>Q</b> Quebec	<b>R</b> Romeo	<b>S</b> Sierra	<b>T</b> Tango
<b>U</b> Uniform	<b>V</b> Victor	<b>W</b> Whiskey	<b>X</b> X-ray	<b>Y</b> Yankee
<b>Z</b> Zulu				

### EXAMPLE:

WHISKEY HOTEL ALPHA  
TANGO

INDIA SIERRA

YANKEE OSCAR UNIFORM  
ROMEO

FOXTROT ALPHA VICTOR  
OSCAR ROMEO INDIA TANGO  
ECHO

CHARLIE OSCAR LIMA  
OSCAR ROMEO

### YOUR TURN!



# CIPHER WORKSHEETS

## CAESAR CIPHER

In cryptography, a Caesar cipher, also known as a Caesar shift cipher or shift cipher, is one of the simplest and most widely-known encryption techniques. It is a type of substitution cipher in which each letter in the plaintext is replaced by a letter some fixed number of positions further down the alphabet. For example, with a shift of 3, A would be replaced by D, B would become E, and so on.

The method is named after Julius Caesar, who used it to communicate with his generals.  
(Definition from [academickids.com](http://academickids.com))

### INSTRUCTIONS:

#### To make your cipher wheel:

1. Cut out both discs on the next page.
2. Poke holes in the center of each on the dot.
3. Line up the holes with the small disc on top.
4. Place a fastener through the holes.

#### How to use:

1. Decide your shift number; let's use 3.
2. Align the arrow on the small disc 3 letters to the right (D).
3. To encrypt a message, go from the inner to the outer wheel (HELLO becomes KHOOR).
4. To decrypt a message, go from the outer to the inner wheel (JRRGEBH becomes GOODBYE).

### EXAMPLE:

WKLV FLSKHU

PDNHV PHVVDJHV

ORRN IXQQB.

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## CAESAR CIPHER

