

Phillips cipher

The Red River gang used Phillips cipher with shifted rows and a left to right fill.

1. Choose a code word and cross off any duplicate letters

Example: **COMPETE**

2. Fill in a 5x5 Polybius square:

- a. Start with the code word with repeated letters omitted, then continue with the rest of the letter in alphabetical order.
- b. Fill the square left to right -when you get to the end of a row start at the beginning of the next row.
- c. I/J share a square (we just write in the I in the square)

Example

	1	2	3	4	5
1	C	O	M	P	E
2	T	A	B	D	F
3	G	H	I	K	L
4	N	Q	R	S	U
5	V	W	X	Y	Z

3. Create 8 grids by shifting rows down as follows:

- a. Grid one is the original Polybius square
- b. Grids 3,4 and 5 are made by shifting the first row down one row at a time.
- c. Grids 6,7, and 8 are made by (starting with grid 5) shifting row two down one row at a time.

	#1		#2		#3		#4										
1	C	O	M	P	E	2	T	A	B	D	F	2	T	A	B	D	F
2	T	A	B	D	F	1	C	O	M	P	E	3	G	H	I	K	L
3	G	H	I	K	L	3	G	H	I	K	L	1	C	O	M	P	E
4	N	Q	R	S	U	4	N	Q	R	S	U	4	N	Q	R	S	U
5	V	W	X	Y	Z	5	V	W	X	Y	Z	1	C	O	M	P	E
5	V	W	X	Y	Z	5	V	W	X	Y	Z	5	V	W	X	Y	Z
2	T	A	B	D	F	3	G	H	I	K	L	3	G	H	I	K	L
3	G	H	I	K	L	2	T	A	B	D	F	4	N	Q	R	S	U
4	N	Q	R	S	U	4	N	Q	R	S	U	2	T	A	B	D	F
5	V	W	X	Y	Z	5	V	W	X	Y	Z	5	V	W	X	Y	Z
1	C	O	M	P	E	1	C	O	M	P	E	1	C	O	M	P	E

4. Each grid is used in turn to encipher 5 plaintext letters. Each plaintext letter is enciphered by taking as substitute the letter diagonally down to the right using the correct grid. A plaintext letter from the fifth column is replaced by the letter from the first column and the row below it; a plaintext letter in the fifth row is replaced by the letter in the first row and to its right.

SQ	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3	3	3	4	4	4	4	4	4	5	5	5		
pt	s	q	u	a	r	e	s	o	n	e	a	n	d	f	i	v	e	a	r	e	t	h	e					
CT	Z	X	V	I	Y	G	Z	I	W	G	I	W	L	G	P	A	V	I	P	V	H	R	T					
SQ	5	5	6	6	6	6	6	7	7	7	7	7	7	7	7	7	7	8	8	8	8	8	8	1	1	1	1	2
pt	s	a	m	e	a	n	d	s	o	a	r	e	t	w	o	a	n	d	e	i	g	h	t					
CT	Z	I	K	G	R	W	U	F	I	X	D	G	O	B	I	M	W	L	T	S	Q	R	O					

CT: ZXVIYGZ IWG IWL GPAV IPV HRT ZIKG RWU FI XDG OBI MWL TWQRO