

### **SEQUENCE TRANSPOSITION CIPHER (100-150 letters)**

Choose a keyword/phrase with 10 letters and a numerical primer of 5 digits. Use the 5-digit primer to form a numerical sequence the length of the plain text.

Extend the 5 digit primer by adding successive pairs of digits (i.e., The 1st plus 2nd give the 6th, 2nd plus 3rd give 7th, etc, dropping 10's.

**pt:** THE EARLY BIRD GETS THE WORM.

**Keyphrase:** GUMMYBEARS

**Primer:** 69315

Apply the sequence digits sequentially to the plaintext.

**pt:** T H E E A R L Y B I R D G E T S T H E W O R M  
**SS:** 6 9 3 1 5 5 2 4 6 0 7 6 0 6 7 3 6 6 3 0 9 2 9

Convert the Keyword into a 0-9 sequence and gather the plaintext by assigned sequence number.

G	U	M	M	Y	B	E	A	R	S
4	9	5	6	0	2	3	1	7	8
Y	H	A	T	I	L	E	E	R	-
O	R	B	G	R	S		T		
M	D	W		E					
			E						
			T						
			H						

Draw off the cipher text by taking off the columns in order. In this case:

**CT:** Y H O M A R T B D E T H I G W L R E S E E R T  
**SS:** 4 9 9 9 5 5 6 6 6 6 6 6 0 0 0 2 2 3 3 3 1 7 7

Draw off the cipher text in blocks of 5. Add the primer at the begining of the text and provide a check sum digit at the end.

**CT: 69315 YHOMA RTBDE THIGW LRESE ERT 9.**