





## Code Cracking Puzzle: Bacon not Turkey this Christmas: Hints

This puzzle uses the Bacon Cipher invented by Sir Francis Bacon and published at the time of Gunpowder plot in Stuart Britain. It uses a binary code to encrypt the message and steganography to hide it in some innocuous message.

Each letter in the message being hidden was converted to binary using the table to the right (Bacon used a and b instead of 0 and 1 for his version of binary). This gives a coded version of the message as 'a's and 'b's.

Next the carol it was to be hidden in was written out a letter at a time, putting a lower case letter where there was an 'a' in the coded version, and putting an upper case letter where there was a 'b' in the coded version. Once the message was embedded, all remaining letters of the carol were written as uppercase.

Ciphertext (5 letter chunks)	Bacon binary version	plaintext letter
	iviting with a sansa of f	

	Plaintext & Ciphertext					
Α	aaaaa	N	abbaa			
В	aaaab	0	abbab			
С	aaaba	Р	abbba			
D	aaabb	Q	abbbb			
Ε	aabaa	R	baaaa			
F	aabab	S	baaab			
G	aabba	Т	baaba			
Н	aabbb	U, V	baabb			
I, J	abaaa	W	babaa			
K	abaab	X	babab			
L	ababa	Υ	babba			
М	ababb	Z	babbb			
				-		

Fill in this table to decrypt the message.



Computer Science activities with a sense of fun:
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Created by Paul Curzon
for Teaching London Computing: <a href="http://teachinglondoncomputing.org">http://teachinglondoncomputing.org</a>

