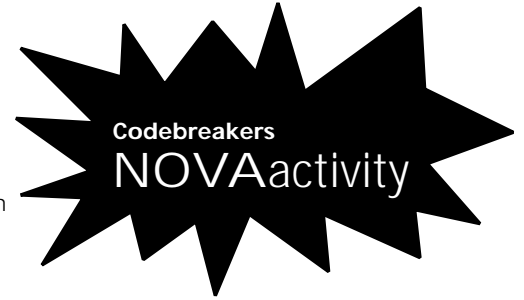


Codemaker's Guidelines



There are many different ways to create ciphers. Some are more complicated than others. Try your hand at encoding a message. Here are some strategies you might want to use.

1 Think of a "secret password" in which no letter of the alphabet is used more than once. Write the password. Then write the rest of the alphabet, but leave out all the letters in the password. So, if the password is GOTHIC, what you write would look like this:

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

Write the alphabet in order under the password alphabet to see which letter stands for what.

Using this cipher, the word A P P L E would read G Q Q N J.

2 Create a matrix like the one below.

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

To encode a message, replace each letter with a two-digit number – the number of the row and number of the column where the letter is found. For example, the word APPLE would read:

A P P L E
 11 35 35 31 15, or
 1135353115.

3 Create a complex cipher based on the above grid, but with significant alterations to help hide the letter frequencies. In the following case, each letter of each word in a message comes from a different cipher. (Each cipher is designated by a number.)

	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
1	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
2	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
3	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

(and so on)

So the phrase APPLES ARE GOOD might be represented as follows:

A P P L E S A R E G O O D
 B R S M F U D S H H Q R E

Note that the repeated letters, a, p, and o, are not represented by the same cipher letter and that in some cases, the same cipher letter stands for two different letters (H = e and g; S = p and r; R = p and o).

4 Write your own coded message here.