

Science Olympiad — Eagle STEM Scrimmage

Names of participants: (Please print neatly)

School Name: _____

Team Number: **A** _____

Check your team: ☐ Varsity ☐ JV1 ☐ JV2 ☐ JV3

Warning: Do not open this packet until given permission to do so.

Note: There are useful notes after this page.

Question	Value	Incorrect letters	Deduction	Score
1	51			
2	184			
3	55			
4	175			
5	69			
6	76			
7	69			
8	54			
9	216			
10	67			
11	48			
12	63			
13	42			
14	65			
15	97			
16	54			
17	97			
18	102			
Final Score				

1) **[51 points]** Solve this tapcode cipher which is about eagles!

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2) **[184 points]** Solve this Aristocrat cipher which includes the word “team” twice.

EQC ZEMCPTEQ AI EQC ECFD VZ CFJQ

VPLVYVLNFK DCDXCM. EQC ZEMCPTEQ

AI CFJQ DCDXCM VZ EQC ECFD.

	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
Frequency	2		14	6	10	5			2	2	1	2	4	1		3	8			2		5		2	1	4
Replacement																										

3) [55 points] Solve this Atbash cipher which is a quote by former president John Adams

G	L	Y	V	T	L	L	W	,	Z	M	W	G	L	W	L	T	L	L	W	,
								,												,
R	H	Z	O	O	D	V	S	Z	E	V	G	L	W	L						

4) [175 points] Solve this Aristocrat cipher which includes the word “eagle”

F AFUUPO'E NDGO DE OP OFXC; FJ

LFNXL'E NDGO DE OP GXH. D'T

UFOWLU VL FJ LFNXL.

	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
Frequency	1		1	5	4	8	3	1		2		6		4	7	3				1	4	1	1	4		
Replacement																										

5) [69 points] Solve this Pig Pen cipher which is a quote from Immanuel Kant

V	L	┐	□	□	L	□	┐	V	┐	┐	┐	┐	□	┐	A	□	┐

┐	□	┐	V	┐	□	┐	┐	□	.	V	┐	V	┐	┐	┐	┐	V
									.								

┐	┐	┐	┐	□	┐	A	□	┐	┐	┐	┐	□	.
													.

6) [76 points] Solve this joke which has been encoded as an Atbash Cipher

D	S	B	W	L	Y	R	I	W	H	U	O	B	H	L	F	G	S	R	M	G	S	V

D	R	M	G	V	I	?	R	G	'	H	U	Z	H	G	V	I	G	S	Z	M
						?			'											

D	Z	O	P	R	M	T	.
							.

7) **[69 points]** Solve this Knights Templar cipher!

◊ ◀	◄ ▽ ▲	▶ ▶ ▶ ➤	◀ ◊ ✕ >	◄ ▽ ▲ ➤ ▽ ▶ ◊ ◀

◊ ✕	◄ ▽ ▶	◊ ➤ ▽ ✕ ▲	▽ ◄ ▽ ➤ ◄ ,	◊ ▶ ▽ ▶ ▶ .
			,	.

8) **[54 points]** This quote by John O'Hara has been encoded with the ceasar cipher

Y L	Y P R G Q R	G Q	F G Q	M U L	D Y S J R .
					.

LKUFVUWUIUV.

[illegible]

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11) [48 points] Solve this Benjamin Franklin quote which has been encoded with the Dancing Men Cipher

													

										

12) [63 points] Solve this Knights Templar Cipher

																		

																

									

13) **[42 points]** Solve this Caesar Cipher with a shift of 2.

K	O	K	V	C	V	K	Q	P

K	U

V	J	G

U	K	P	E	G	T	G	U	V

H	Q	T	O

Q	H

V	G	N	G	X	K	U	K	Q	P

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14) **[65 points]** Solve this quote which has been encoded with the Dancing Men Cipher



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15) **[97 points]** Solve this Vigenère Cipher which has been encoded using a key word of “can”

Y	E	Z	W	S	G	J	A	I	G	A	C	K	E	F	V	R	R	U	S	P

C	N	A	Q	T	R	Z	I	F	V	I	A	V	H	R	R	R	R	U	E	A

E	E	B	H	A	C	K	E

16) **[54 points]** Solve this Roald Dahl quote which has been encoded with the tap code cipher!

●●● ● ●● ●●●● ●● ● ●●●●● ●● ●●●● ●●●● ●●●
 ●●● ●● ●●● ●●●● ●●●● ●● ● ●●●●● ●● ● ●●●● ●●●●● ●●● ●●●
 ●● ●●●● ●● ● ●●●●● ●●●● ●●● ●●●● ●●●● ●●●●
 ●●● ●●●●● ●●● ● ●● ●●●●● ●●●●
 ●● ●● ●● ●● ●●● ●● ●●●●● ●●●● ●●●● ●●● ●

17) [97 points] Solve this joke which has been encoded with the Caesar Cipher.

X	I	B	U	E	J	E	U	I	F	Q	J	S	B	U	F	T	B	Z	X	I	F	O

I	F	G	P	V	O	E	T	P	N	F	P	O	F	?	J	T	F	B	Z	P	V	!
														?								!

18) [102 points] This Vigenère encoded quote uses a keyword of **EAGLE**. What does it say?

A	H	E	N	E	R	T	E	Z	Y	X	R	A	D	X	E	T	U	X	W	X	H	K	J	Q

E	K	K	F	T	I	V	K	C	C	X	H	O	Y	K