



KNOX
GRAMMAR
SCHOOL

STATE

DA VINCI DECATHLON 2019

CELEBRATING THE ACADEMIC GIFTS OF STUDENTS
IN YEARS 7 & 8



CODE BREAKING solutions

TEAM NUMBER _____

1	2	3	4	5	6	7	8	9	10	bonus	Total	Rank
/5	/5	/5	/5	/5	/5	/5	/5	/5	/5	/3	/53	

CODING THE LANDSCAPE

"THE VOYAGE OF DISCOVERY IS NOT IN SEEKING NEW LANDSCAPES BUT IN HAVING NEW EYES" (MARCEL PROUST).

You are to embark upon a journey through the landscape of the Facebook rooftop garden. 2,800 employees from the building beneath the 9 acre garden have the opportunity to use the spaces in the gardens to meet, recreate, relax and think. Much can be said about clearing the mind to allow genuine creativity to emerge.



Now it's your turn....

(Photos by Carol Moholt, Pacific Horticultural Society)

Your task is to collect a variety of coded snippets of wisdom. There will be a mixture of sayings and quotes alternating with clues to plot your way through the garden. Plot these on the map provided to find another (hidden) landscape.



Each code is awarded 5 marks each and the final codeword, 3 bonus marks. Make sure that you enter your answers in the Answer Page at the end of the questions. This is the page that will be marked.

CODE 1

Fognrnzgvob dv mvvw gl ivxltmrav gszg dsrov sfnzmh xlmgrmfv gl yfrow
fiyzm ozmwhxzkvh, dv hsziv gsvhv hkzxvh drgs lgsvih hkvxrvh. Wzerw
Hfafpr

CODE 2

Plot these clues:

Nectarine	Fish	Eggs	Edamame
Icecream	Oranges		Inca berries
Nuts	Udon		Grapes
Edam	Rice		Horseradish
			Tamarillo

CODE 3

Find the message within:

DEMAEHRWVSTHMLNSNLNSAEOHMNOSBLTADICVRHOEHRWFEAHMTERARLGOSEDR
RASRWEEEI I T EAY ADADADCPSFUAPS I I I YNDSOETENWEEEEELTOEHGETEI IU LAES
WRALRAES.
EELDEMR
JNTASCS
OAHNAK

CODE 4

This will help you find your way around the next part of the map.

7 6 C 0 6 ^ L 7 7 0 7 7 6 C 6 7 0 7 7 7
 C 7 7 0 7 0 7 7 7 0 7 7 0 6 6 7 0 7 7 7
 C 0 6 6 ^ 0 7 7 7 7 7 6 7 0 7

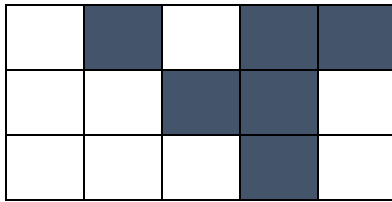
CODE 5

The key should be obvious but then, maybe not.

d t e i t i l o k i a h k t h n t t e o i c s h a n t
 e t e a d w t o k y a l i l a w l l w r e t i o o s h
 t t u e r n h u f t c s d v e o o i r o w h d e t n e
 r a l o d e s n f c w s p h s a e e l o t e r e p p d
 t u b c n o e t t v d a r h e e t h c e c a o e h t n
 n u o o s e j r y l x x e x e v x s

CODE 6

The grid will show you all three stops but take care as there is a mixture of letters and numbers – two of one, one of the other.



CODE 7

Joan Kirner spoke of the Australian landscape:

.Irtnc ry dst r hchw scrf f sns sht tg y dn .tht vhc t gnhc tmlc nkt
s't .dnl ht nw t'nd w, s snw dnl ht tht slr t gnnngb ylwls r , knht _
, snlrts dn .ntn ht r flsry htw dtcnnc yllr tn r'y ,dnl ht htw dtcnnc
r'y ssln , wh f gndhtsr dn wn _ m thgrb t

CODE 8

Time to plot:

16 73 R22 7 G 85 52 42 23 E T8 28 D 90 A60 90 E7 E

CODE 9

I stress the uniqueness of the Australian landscape and

its meteorological and multiple content ARTHUR BOYD

CODE 10

843 968 23288 2686879 47 2 526372273 63 843 6463 - 5646 65736

BONUS: Plot your clues where appropriate. What is the hidden codeword?



KEY

- 1 Roof access at building lobbies
- 2 Roof access at exterior ramp
- 3 Cafe
- 4 Art installation

- 5 Sunken Garden
- 6 Pop-up
- 7 Pop-down
- 8 Shade structure

- 9 Overlook
- 10 Event lawn
- 11 Office level garden terraces
- 12 Site level landscape

- A Coastal sage scrub
- B Meadow & perennial garden
- C Riparian seasonal garden
- D East Glade & Ceanothus Garden

- E Coastal Prairie
- F West Glade & Manzanita Garden

LANDSCAPE TYPES

ANSWER SHEET:

TEAM NO: _____

CODE	MESSAGE	MARK
1	Ultimately, we need to recognise that while humans continue to build urban landscapes, we share these spaces with other species. David Suzuki Atbash cipher	
2	nine, four, E, eight These plot on the map to form a 'C' Marks here are for the decoded numbers and letter	
3	Dreams are where we visit the many lands and landscapes of human possibility and discover the one where we feel at home. The great religious leaders were all dreamers. Jonathan Sacks Railfence	
4	Go from C then to four and five. Next trace your way from eight to ten. PIGPEN variant # X #. X. The instructions trace the letter 'A' on the map C,4,5,/ 8,10	
5	I'd like to think that the actions we take today will allow others in the future to discover the wonders of landscapes we helped protect but never had the chance to enjoy ourselves. Annie Leibovitz 'Landscape' is the key to this block cipher.	
6	11,6,B Grid shows binary for numbers 11 and 6 1011, 110, then binary for 'B', 10 These clues trace the letter 'L' on the map	
7	It brought me a new understanding of how, unless you're connected with the land, you're not really connected with yourself or the nation. And Australians, I think, are slowly beginning to realise that the land owns us, we don't own the land. It's taken climate change to achieve that. And you get this sense of forces which are outside your control. Backwards with no vowels (Joan Kirner – on the immensity of outback Australia)	
8	Starting at five, move to two, D, nine and then E. numbers are mirrored, text is periodic table code This traces the letter 'M' on the map- M 5,2,D,9,E	
9	I stress the uniqueness of the Australian landscape and its metaphysical and mythic content. Arthur Boyd Mirror writing	
10	The you beaut country is a landscape of the mind. John Olsen Phone code	
bonus	CALM	

Marking Guidelines:

Each task is worth 5 marks.

5 marks – completely correct – no details missing or inaccurate

Take off half a mark for each mistake initially.

Overall, the proportion of marks awarded should be in line with the proportion of unique elements of the cipher decoded. Note that it may be that a repeated word is decoded but no other words are decoded. Make sure that all markers are consistent in the proportion of marks awarded.

A solution showing some progress should not be awarded 0. Give some acknowledgement of progress even if only half a mark.

END OF PAPER

Periodic Table of the Elements

1 H Hydrogen 1.01																	2 He Helium 4.00
3 Li Lithium 6.94	4 Be Beryllium 9.01											5 B Boron 10.81	6 C Carbon 12.01	7 N Nitrogen 14.01	8 O Oxygen 16.00	9 F Fluorine 19.00	10 Ne Neon 20.18
11 Na Sodium 22.99	12 Mg Magnesium 24.31											13 Al Aluminum 26.98	14 Si Silicon 28.09	15 P Phosphorus 30.97	16 S Sulfur 32.06	17 Cl Chlorine 35.45	18 Ar Argon 39.95
19 K Potassium 39.10	20 Ca Calcium 40.08	21 Sc Scandium 44.96	22 Ti Titanium 47.88	23 V Vanadium 50.94	24 Cr Chromium 51.99	25 Mn Manganese 54.94	26 Fe Iron 55.85	27 Co Cobalt 58.93	28 Ni Nickel 58.69	29 Cu Copper 63.55	30 Zn Zinc 65.38	31 Ga Gallium 69.72	32 Ge Germanium 72.63	33 As Arsenic 74.92	34 Se Selenium 78.97	35 Br Bromine 79.90	36 Kr Krypton 84.80
37 Rb Rubidium 85.47	38 Sr Strontium 87.62	39 Y Yttrium 88.91	40 Zr Zirconium 91.22	41 Nb Niobium 92.91	42 Mo Molybdenum 95.95	43 Tc Technetium 98.91	44 Ru Ruthenium 101.07	45 Rh Rhodium 102.91	46 Pd Palladium 106.42	47 Ag Silver 107.87	48 Cd Cadmium 112.41	49 In Indium 114.82	50 Sn Tin 118.71	51 Sb Antimony 121.76	52 Te Tellurium 127.6	53 I Iodine 126.90	54 Xe Xenon 131.29
55 Cs Cesium 132.91	56 Ba Barium 137.33	57-71 Lanthanides	72 Hf Hafnium 178.49	73 Ta Tantalum 180.95	74 W Tungsten 183.85	75 Re Rhenium 186.21	76 Os Osmium 190.23	77 Ir Iridium 192.22	78 Pt Platinum 195.08	79 Au Gold 196.97	80 Hg Mercury 200.59	81 Tl Thallium 204.38	82 Pb Lead 207.20	83 Bi Bismuth 208.98	84 Po Polonium [208.98]	85 At Astatine [209.98]	86 Rn Radon [222.02]
87 Fr Francium [223.02]	88 Ra Radium [226.03]	89-103 Actinides	104 Rf Rutherfordium [261]	105 Db Dubnium [262]	106 Sg Seaborgium [266]	107 Bh Bohrium [264]	108 Hs Hassium [269]	109 Mt Meitnerium [278]	110 Ds Darmstadtium [281]	111 Rg Roentgenium [280]	112 Cn Copernicium [285]	113 Nh Nihonium [286]	114 Fl Flerovium [289]	115 Mc Moscovium [289]	116 Lv Livermorium [293]	117 Ts Tennessine [294]	118 Og Oganesson [294]
57 La Lanthanum 138.91	58 Ce Cerium 140.12	59 Pr Praseodymium 140.91	60 Nd Neodymium 144.24	61 Pm Promethium 144.91	62 Sm Samarium 150.36	63 Eu Europium 151.96	64 Gd Gadolinium 157.25	65 Tb Terbium 158.93	66 Dy Dysprosium 162.50	67 Ho Holmium 164.93	68 Er Erbium 167.26	69 Tm Thulium 168.93	70 Yb Ytterbium 173.06	71 Lu Lutetium 174.97			
89 Ac Actinium 227.03	90 Th Thorium 232.04	91 Pa Protactinium 231.04	92 U Uranium 238.03	93 Np Neptunium 237.05	94 Pu Plutonium 244.06	95 Am Americium 243.06	96 Cm Curium 247.07	97 Bk Berkelium 247.07	98 Cf Californium 251.08	99 Es Einsteinium [254]	100 Fm Fermium 257.10	101 Md Mendelevium 258.10	102 No Nobelium 259.10	103 Lr Lawrencium [262]			

Alkali Metal Alkaline Earth Transition Metal Basic Metal Metalloid Nonmetal Halogen Noble Gas Lanthanide Actinide

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