

## GEOCACHING LANCASTER UNIVERSITY

Geocaching is an outdoor sport activity based on GPS (Global Positioning System). Players use a receiver or mobile device and other navigational techniques to hide or look for containers, called "geocaches" or "caches".

The cache is usually in a waterproof plastic container with a logbook where geocachers write their registered nickname and date they find it. Larger containers usually contain items for trading like plastic toys, hockey cards or special trackable items called Travel Bugs or Geocoins. Trackable items are logged on the website and moved from cache to cache.



### RULES!

**Do not leave the university campus**

**Take care on roads- they're fairly quiet but cars still drive up and down.**

**People live and work here. Don't be a nuisance! Don't be messing about and shouting around the buildings.**

**Don't even go near the fence between the woods and the motorway.**

**Stay in your groups! Nobody should be alone.**

**Watch the time and make sure you're back at the meeting point by 8:20.**

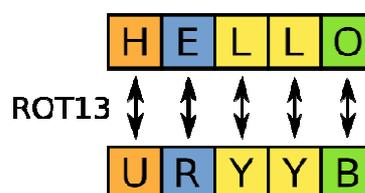
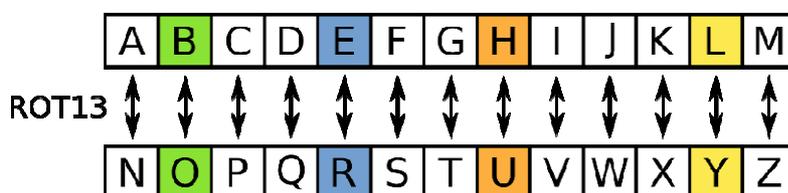
There's a number of caches hidden around the University campus. Your task's to find as many as you can, write your group ("16<sup>th</sup> Lancaster Cubs") and names neatly on the sheet or in the logbook and then put the cache back **exactly** as you found it.

You'll need a GPS device, which might be a smartphone. You might be with a leader, and it might be their phone you're using, or you might have been lent a phone. **Be careful with them, they're delicate and cost a lot of money.**

**The coordinates are in the table on the back of this sheet.** You need to type in the coordinates of the cache you're going after, and then the device will show you which direction to go in and how far away you are. It doesn't know what the safe route is, though- you need to figure that out for yourself. It's useful having a map and finding the location of the cache on the map, using the grid references, so you can work out the best route. When you get close, you'll have to look for the cache- it will be hidden, and although you might have clues you'll have to look carefully. When you find it, **make sure you**

know where it is and how it's hidden so you can put it back as you found it!

Sometimes the description isn't enough and it's really hard to find the cache, so there's an extra hint. But so you don't just read the hint it's written in a code called "ROT13". This is a code called a Caesar Cipher, where each letter is swapped with another. The picture shows the swap and shows how you'd encrypt the word "HELLO" to become "URYYB" and back again.



<b>Name</b>	<b>Lat/Long</b> WGS84	<b>OS Grid</b>	<b>Description</b>	<b>Hint</b>
<b>Campus Trail: Avenue</b>	N 54° 00.782" W 002° 47.683"	SD 48020 57738	Many of these trees are now reaching the end of their lives and are in the process of being felled. The increased light will promote the growth of the remaining indigenous species, while their trunks will be cut up and left to provide decaying timber habitats for insects and other small animals.	Orgjrra gur yvivat naq gur qrnq
<b>Campus Trail: The Duck Pond</b>	N 54° 00.783" W 002° 47.402"	SD 48327 57736	A cache located just off the Campus Woodland Trail down by the duck pond.	Qhpx qbja. Srry nebhaq. Ab arrq gb trg lbhe srrg zhqql (naq rnfvre vs lbh qba'g!)
<b>Campus Trail: Amongst Old Trees</b>	N 54° 00.898" W 002° 47.577"	SD 48138 57951	A relatively straightforward offset multi. Details of the distance and bearing of the final cache location from the chestnut tree are hidden amongst some other old trees at the published location.	1. Unatvat ba srapr 2. Fznyy ybpx-naq-ybpx. Vafvqr gerr. Fgvpxbsyntr
<b>Campus Trail: The Beech Grove</b>	N 54° 00.853" W 002° 47.012"	SD 48755 57861	This section of the woodland trail passes through some fine old trees, with the most imposing being a stand of beech, which present a lovely sight at any time of the year but especially in the spring when their leaves are fresh and green	ybt va n ybt va n ybt
<b>Campus Trail: The Pixies' Letterbox</b>	N 54° 00.715" W 002° 46.936"	SD 48835 57605	The Pixies' House commands a fine view from its open-plan upper halls. But can you locate their letterbox?	Gel gur genqrfzra'f ragenapr
<b>Campus Trail: The Cuddling Trees</b>	N 54° 00.589" W 002° 46.910"	SD 48861 57370	A small cache hidden in the middle of two trees grown entwined together... like old lovers...	va orgjrra
<b>Motorway Mudness: LU BMX!</b>	N 54° 00.390" W 002° 46.910"	SD 48857 57001	Deep in the woods, where GPS coverage is poor, strange things are afoot. Bring your stout footwear, your earplugs and be on your guard against two-wheeled vehicles, and termites or mega-moles, perhaps?	jner pbapergr enoovgf
<b>Campus Trail: Stile? What stile?</b>	N 54° 00.192" W 002° 47.470"	SD 48239 56642	This cache was originally hidden just over a stile that must have once led somewhere... the fence and the stile have since gone. And now the cache similarly...	Oebja enoovg-cebbs
<b>Campus Trail: The Vault</b>	N 54° 00.365" W 002° 47.421"	SD 48298 56961	Hunting for caches along the trim trail does not have to be strenuous	bnx
<b>Campus Trail: Kissing Gate</b>	N 54° 00.543" W 002° 47.440"	SD 48280 57293	A cache close by the Lancaster University Trim Trail. Please do not attempt to remove the cache container from its tie	vil
<b>Campus Trail: Stay in Trim!</b>			See separate page	
<b>Campus Trail: Bonus Cache</b>			<b>Make sure you collect the letter and its numerical value from each of the other campus trail caches</b>	
<b>Uni challenge</b>			See separate page	

**Campus Trail:  
Stay in Trim!**

N 54° 00.340  
W 002° 47.420

SD 48298  
56915

The published coordinates are for the start of the campus Trim Trail, where you will find a map of the various exercise stations making up the trail. To locate the cache itself, you'll need to exercise the little grey cells as well as some of your muscles.

Sam North and Hayley West enjoy exercising and keeping in trim. They use the Lancaster University Trim Trail at least once per week as their regular workout. They like to work out together but find that some of the exercise stations cannot conveniently be used by two people at a time. To accommodate this, as well as to tailor their exercise programmes to their individual needs and preferences, they've devised a set of individual variations that lets them start together and do some exercises at the same place and the same time, and finish together, without either of them having to wait for the other to finish using any of the equipment.

For the workout, they each perform **6** laps of the Trim Trail, following the number of repetitions of each exercise recommended at each of the exercise stations but with the following variations:

- Sam **doubles** the exercises on *Vault, Straddle Jump, Press ups* and *Chin-ups* on each lap
- Hayley **skips** *Tyre Hopscotch* on each lap, but **doubles** all *Situps*

To find the location of GZ, you will need to work out the total tally of exercise repetitions that Sam and Hayley each perform during their work-out session. Their two tallies then supply the missing numbers of the following set of coordinates for the cache:

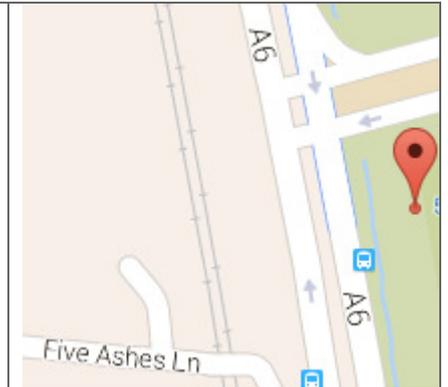
N 54° 00.???

W 002° 47.???

As a check, the total of all of the missing digits is 24. The final cache location is on the University campus. Hint: L

Exercise station	Recommended repetitions	x6 laps	Sam	Hayley
tyre hopscotch vault ladder walk sit ups step ups press ups straddle jump sit ups pole climb hurdles chin ups balance beam sit ups				

<b>Campus Trail: Stay in Trim! ANSWER</b>	N 54° 00.660 W 002° 47.624	SD 48081 57512	<b>Exercise station</b>	<b>Recommended repetitions</b>	<b>x6 laps</b>	<b>Sam N: 660</b>	<b>Hayley W: 624</b>
			tyre hopscotch vault ladder walk sit ups step ups press ups straddle jump sit ups pole climb hurdles chin ups balance beam sit ups	1 10 1 10 5 10 10 10 1 1 5 1 10	6 60 6 60 30 60 60 60 6 6 30 6 60	6 x2 = 120 6 60 30 x2 = 120 60 60 6 6 x2 = 60 6 60	x 0 = 0 60 6 x2 = 120 30 60 60 6 6 30 6 x2 = 120



<b>University Challenge: Lancaster ANSWER</b>	N 54° 00.196 W 002° 47.144	SD 48596 56646	A = 576 B = 70 C = 1974 D = 22 E = 2 F = 4 G = 1691 H = 1012 I = 55	$X = H - A - D - (F \times I) + 2 = 196$ $Y = C - G - (E \times B) + 1 = 144$	A map snippet showing a residential area. A red location pin is placed on a road. The road is labeled 'Alexandra Park Dr'. To the right, a road is labeled 'Hazelrigg Ln'. Below the pin, the text '6 min drive - home' is written in blue. Other roads visible include 'Graduate Ln' and 'Chapel Ln'.
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**Campus Trail:  
The Bonus  
Cache**

The Bonus cache in the Campus Trail series. To locate the cache you will need to collect the numerical value associated with a different letter from each of the other ten caches of the Campus Trail series.

Nyzbfg gur ynfg bar!

Cache	Letter	Numerical value
Stile? What stile?		
Stay in trim		
Vault		
Kissing gate		
Duck pond		
Avenue		
Amongst old trees		
Beech grove		
Pixies letterbox		
Cuddling trees		

The cache is located at:  
N 54° 00 . Z+Y+X+W+V+U+T+S+R-Q  
W 002° X+Y . Q+R+S+T+U+V+W+X+Y-Z

<b>Campus Trail: The Bonus Cache ANSWER</b>	<b>N 54° 00.307 W 002° 47.5</b>	<b>SD 48209 56856</b>	<b>Cache</b>	<b>Letter</b>	<b>Numerical value</b>
			Stile? What stile?	v	4
			Stay in trim	x	22
			Vault	s	43
			Kissing gate	t	11
			Duck pond	w	8
			Avenue	r	34
			Amongst old trees	z	357
			Beech grove	u	9
			Pixies letterbox	y	25
			Cuddling trees	q	206
			<b>N: 357+25+22+8+4+9+11+43+34-206 = 307</b> <b>W: 22+25.206+34+43+11+9+4+8+22+25-357 = 47.5</b>		

**University  
Challenge:  
Lancaster**

LANCASTER  
UNIVERSITY



**Colleges:**  
County  
Bowland  
Furness  
Fylde  
Grizedale  
Pendle  
Graduate  
Lonsdale  
Cartmel

N 54° 00.X  
W 02° 47.Y

X = H - A - D -  
(F x I) + 2 = ?  
Y = C - G - (E x  
B) + 1 = ?

1) What was the birthdate of Princess Alexandra, the first Chancellor of the University?

A = 2512 - 1936 =

2) How many sixes did Clive Lloyd hit during his Test career?

B = 70

3) In which year was the outcome of the Roses Tournament a draw?

C = 1974

4) The Sugar House, on Sugar House Alley, is the LUSU-owned nightclub in Lancaster City Centre. What is the sum of the five digits in the telephone number for the club (excluding area code)?

D = 63508 =

5) How many of the nine colleges have names that begin with the letter F?

E =

6) Although the current University logo takes the form of a shield derived from the University's original coat of arms, the pre-2014 logo instead featured a representation of the spires of the aforementioned Chaplaincy Centre. How many of these red lines are there in that logo?

F =

7) In what year was the death of George Fox, founder of the Quakers?

G = 1691

8) On what date was the company BAE Systems formed?

H = 3011 - 1999 =

9) In 1981, approximately 1400mm of rainfall was recorded at the nearby Hazelrigg Weather Station (itself owned and managed by the Environmental Science department of the University).

How many inches is this (whole number only)?

I = 55

Gurer vf n pnc zvrffvat  
ba gur arneol fgerrg  
anzr fvta. Gur pnc jnf  
abg zvrffvat jura gur  
pnpur jnf cynprq naq  
urapr gur pnpur vf abg  
ybpngrq va gur ubybj  
cbyr abj ivfvoyr.

The cache itself is a  
nano/micro (big nano,  
small micro). It is not  
on University property.