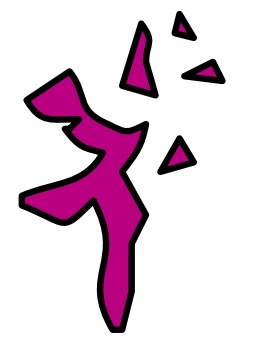


Introducing Scottish School Students to Bioinformatics Through the 4273pi Project

50 % Scottish Schools Reached
(our target: 75%)

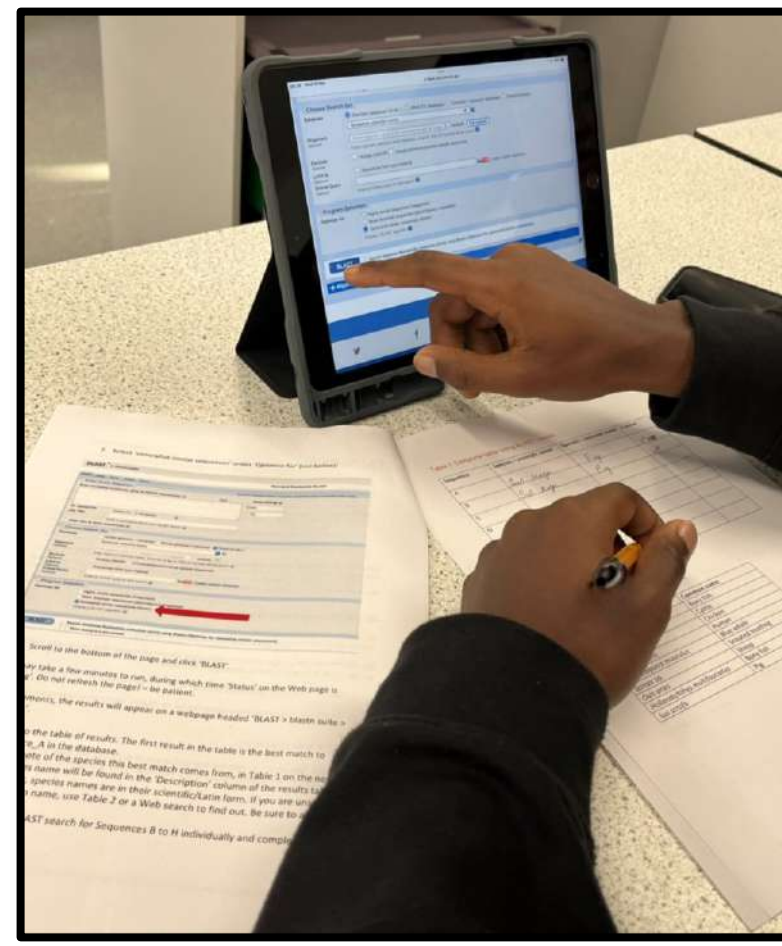
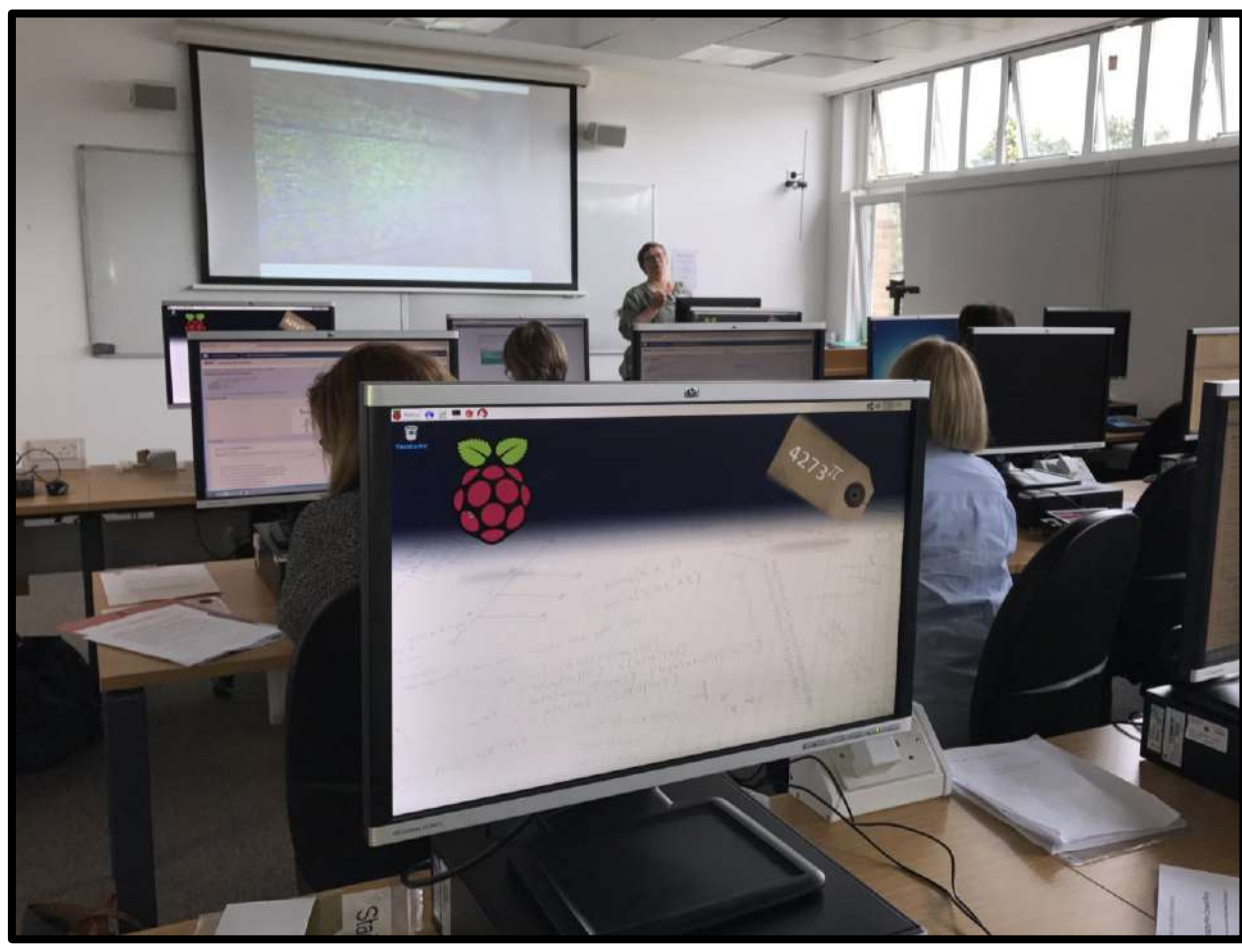


2267 students taught

211 teachers trained

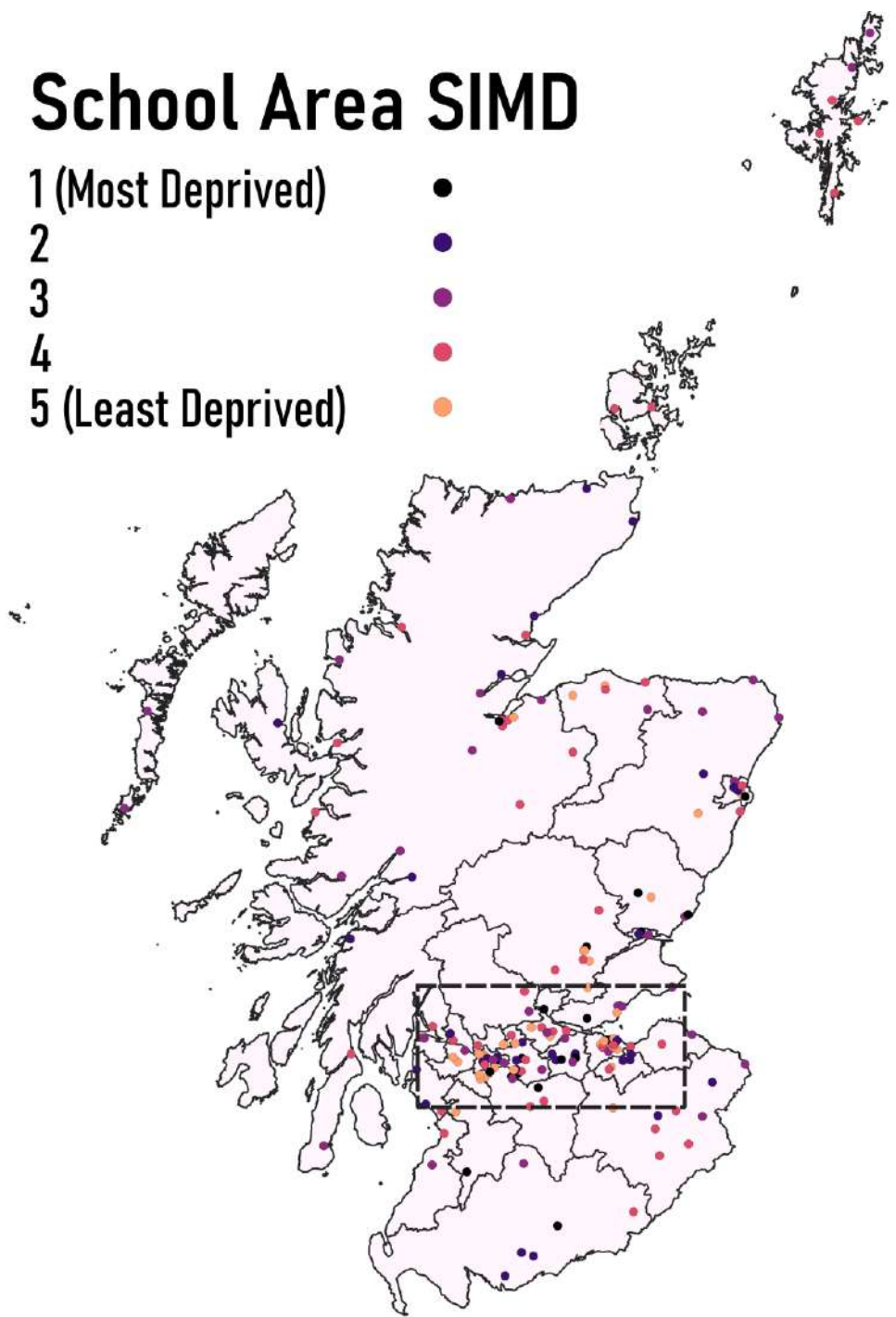
161 events

~13000 km travelled



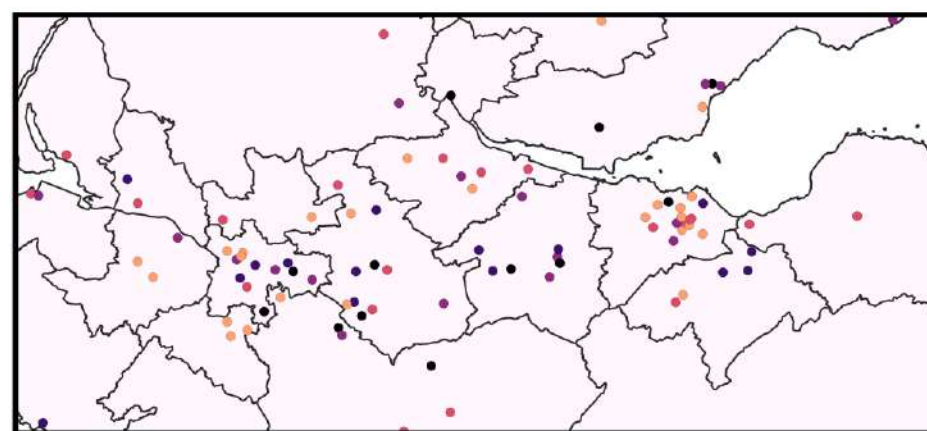
School Area SIMD

- 1 (Most Deprived)
- 2
- 3
- 4
- 5 (Least Deprived)



Scottish Index of Multiple Deprivation (SIMD)

In recent years we have prioritised reaching schools whose pupils are more likely to come from lower opportunity areas. SIMD is one way of measuring this. We intend to maintain this focus in the coming year, particularly in Glasgow.



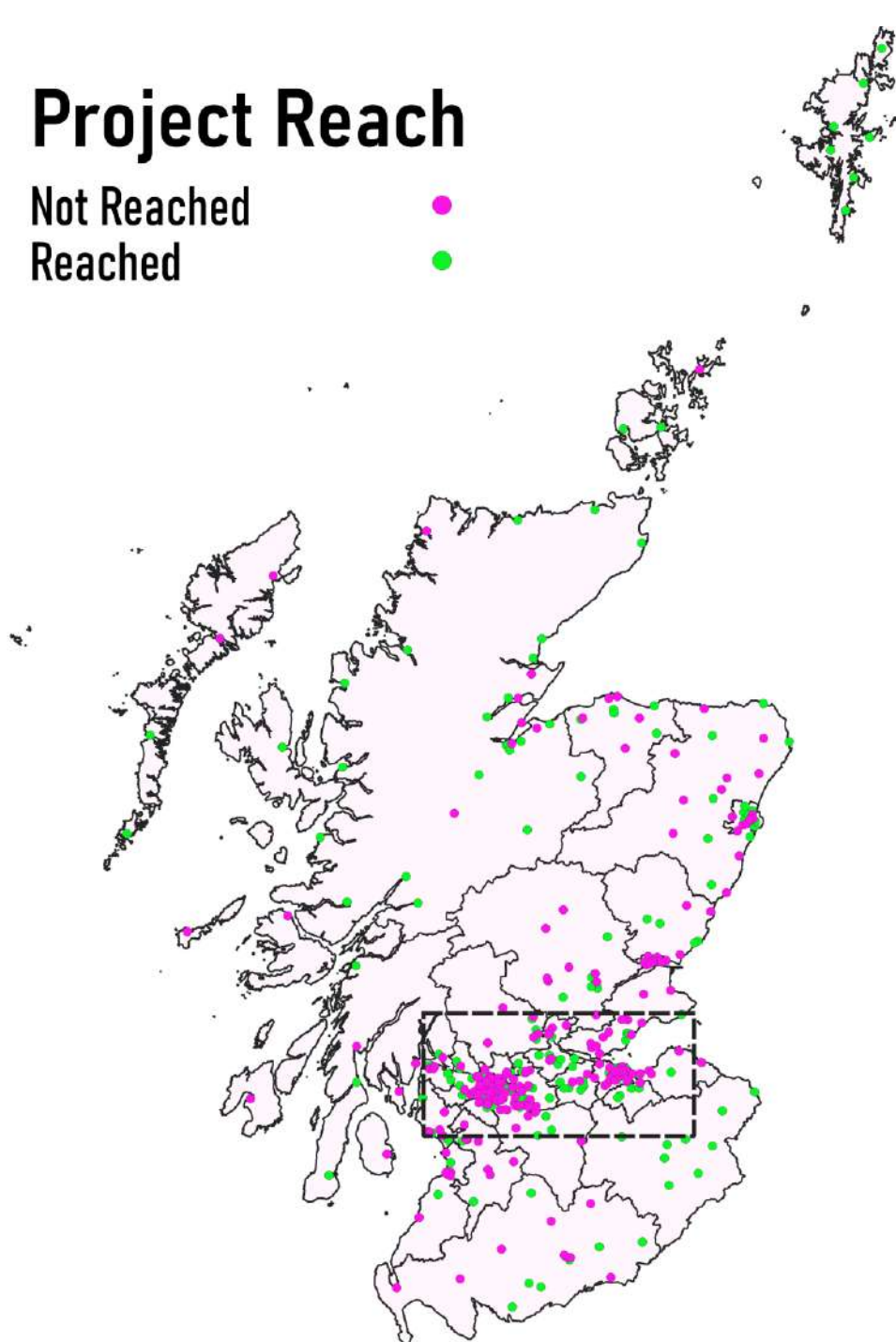
'Real life science and research for pupils at a level they can understand'

'Pupils were very engaged in task and knew about the context of work'

'inspirational for young people'

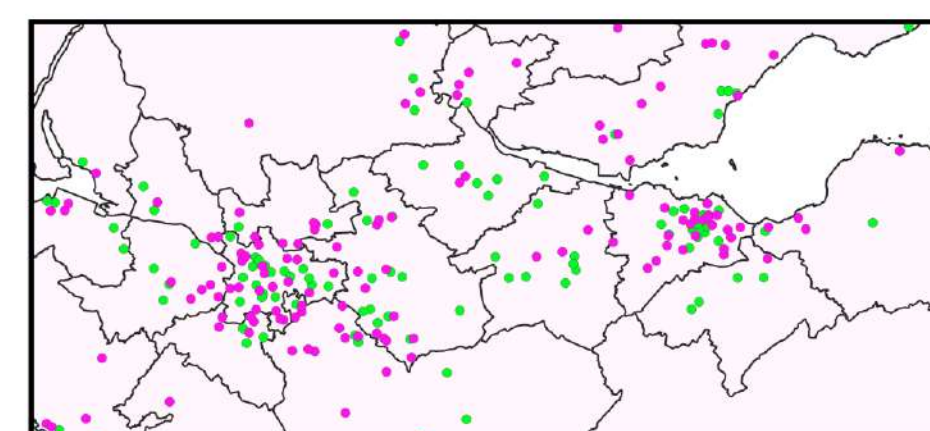
Project Reach

- Not Reached
- Reached



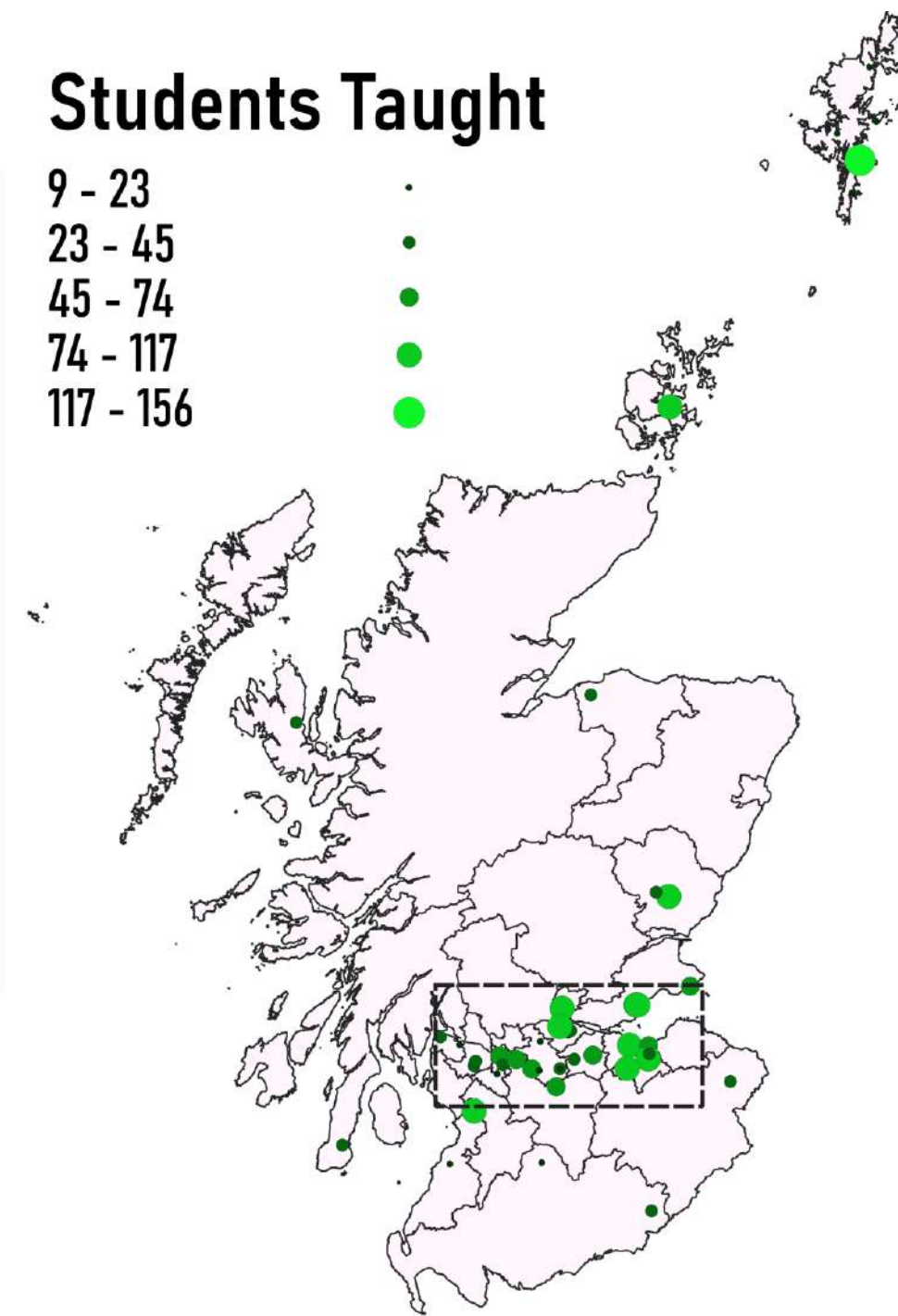
Project Reach

The combined coverage of workshops and teacher training events emphasises how we have tried to reach all areas of Scotland, not just the Central Belt.



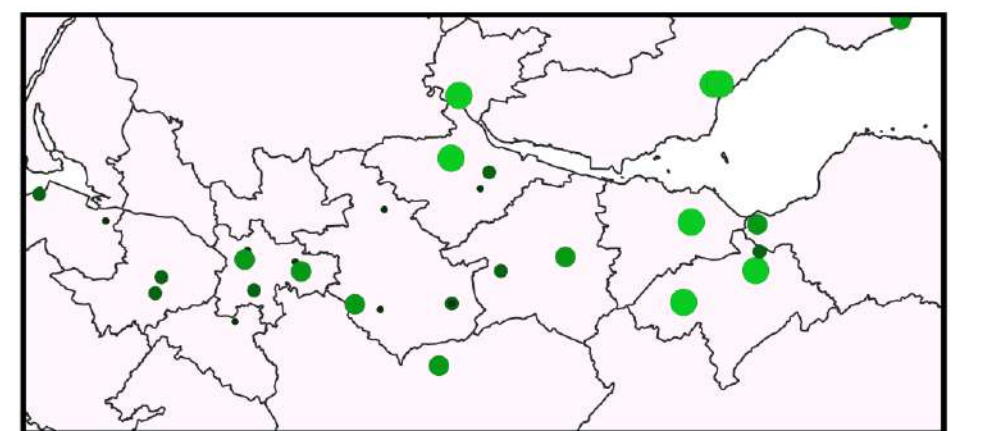
Students Taught

- 9 - 23
- 23 - 45
- 45 - 74
- 74 - 117
- 117 - 156



Students Reached

Our workshops average 17 students per workshop. We attempt where possible to reach all members of a Higher or National 5 cohort in a school. High values are a mixture of repeat visits in a year, and visits across multiple years.



'It gave me an insight into a larger, more complicated world'

'I got to do something new and interesting with someone who was new'

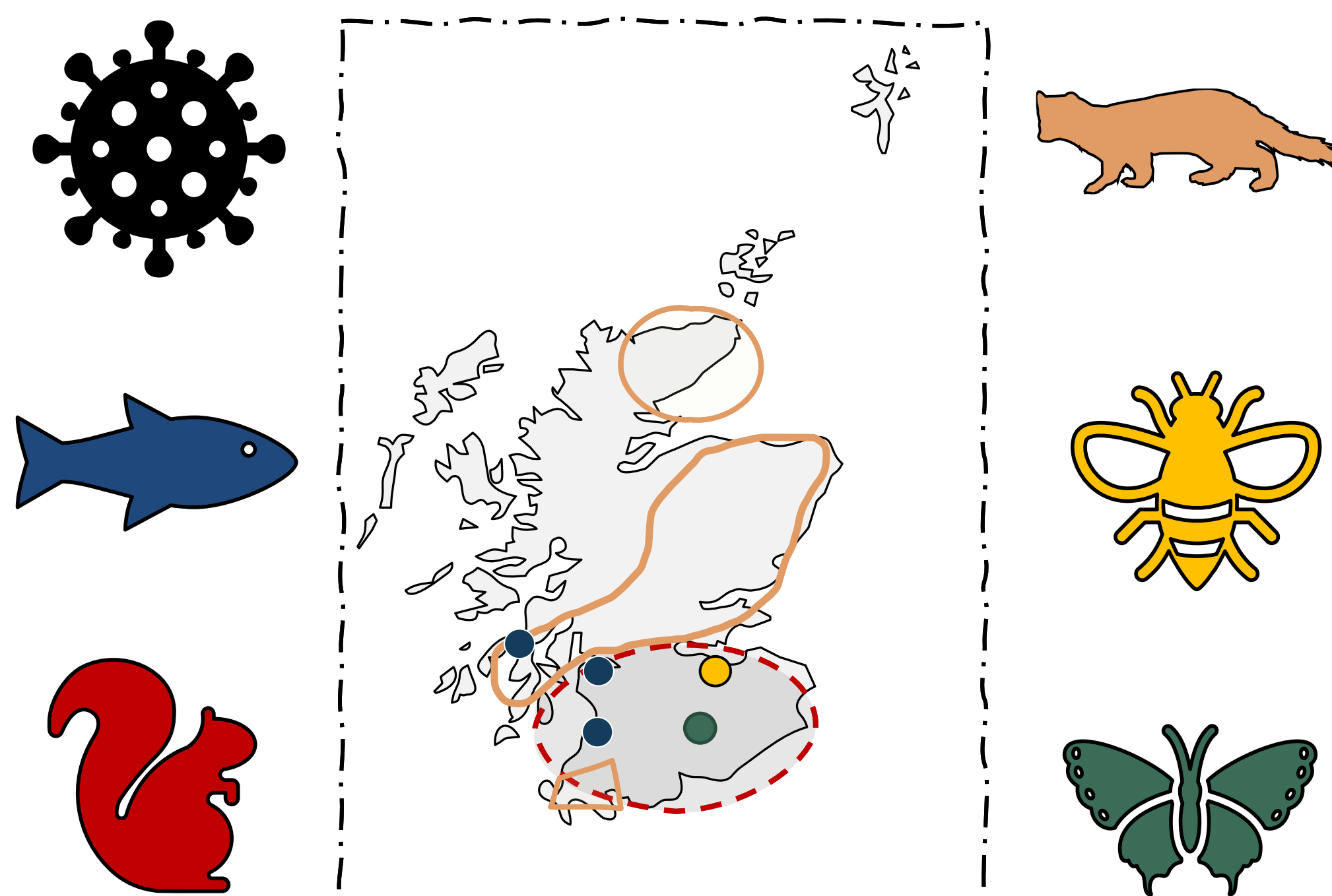
'I like it how you included us and not just speak'

'I gained valuable confidence, knowledge and understanding of Bioinformatics. I now feel like I can share this with other staff members and pupils.'

'Took an area of the course that was a bit 'abstract' and a bit of a mystery and explained it so well that I can go back and re-do these lessons - pupils therefore benefit!'

Workshop #1: Food Detective

- Aimed at younger students.
- Identification of animal DNA which we sequenced from a handmade pork sausage.
- Uses freely-available online resources.
- Works on almost any laptop, desktop, tablet or phone.



Changing & Evolving with Students

School pupils in 2023 are very different from when we started in 2016. The best way to interact and engage is always going to change.

We are trialling student choice in the specific content of our workshops, and introducing tailored interactive visualisations in Minecraft.

If you have anything we should consider, or advice to share, please get in touch!

Workshop #2: The Power of Computers in Biology

- GULO gene (Vitamin C synthesis) case study.
- Discussion on mutations and evolution.
- Uses Raspberry Pi computers and freely available online resources.

New Workshop: PCR & Primer Design

- Basics of PCR protocols and primer design.
- Six different case studies - students choose.
- Website built around *Primer3* and *Primersearch* - tools used to develop and check primers *in silico*.
- Students need to research online, perform data analysis, and link to their existing subject knowledge.

