Dan **North**

PGCE MSc

22, Midland Place,
Swansea
SA7 9QU

+44 7447 459269

northdan51@gmail.com

About Me

Having attained both my physics degrees and PGCE, I intend to continue my career within the education sector by working with scientific outreach programmes. My love for science led me into a career where I could use that to entertain, encourage and educate young people. I'm drawn to outreach as I think it's incredibly important to engage with young people and support those with an interest in STEM fields. Engaging the public is incredibly important and as ambassadors to science we should strive to be open and informative.

Areas of Specialization

Education · Physics · Computer Science

Languages

English
Welsh

Interests

Science Content
Sci-Fi
Gaming
LEGO
Archery
Rock Climbing
Escape Rooms

Resumé

2022–

Delivery Officer
TECHNOCAMPS · Swansea University

After completing my Masters I applied for a role at Technocamps, a pan-Wales outreach project which aims to support and improve digital literacy across Wales. This role has given me countless opportunities to improve my teaching methods, development skills, programming ability and much more. My responsibilities include delivering computer science workshops in schools (ages 3 — 18), delivering teacher training events and conferences, teaching adult sessions and micro-credentials, running summer camps and robotics competitions, representing the project at events (such as science festivals), and developing all sorts of new content. I have been fortunate enough to closely collaborate with many other projects and organisations such as the micro:bit Foundation, Hwb, Amgueddfa Cymru, Theatr na nOg and many more. In my time here I have developed a multitude of new workshops (and other content) both for this project and others; from helping learners build a Python Text Adventure game to having GCSE physics students programme a Nuclear Fission reactor simulation in Scratch. When developing any content, my goal is always to teach something interesting, so that the improvement of digital literacy is merely the ramification of learning a new topic. Engaging learners is always the key, and regardless of their interest in programming; if the topic is exciting then completing the set tasks is a breeze.

2020–

Manager
THE ESCAPE GAME · Swansea

Having been left redundant during COVID, while I went back to university I also applied for a part time role to support myself. This was a role I thoroughly enjoyed, and I found watching peoples thought-process in solving puzzles fascinating. As manager at an escape room I led a team of 10 game masters, with my main responsibilities including; producing weekly rotas, communicating with customers, creating and posting social media content, monitoring and purchasing supplies, upkeep and maintenance of the rooms, and of course running escape rooms! I was also fortunate enough to have a good working relationship with the owner, which allowed me the freedom to develop the website myself and design and build new escape rooms on his behalf.

2018–2020

Instructor & Manager
MAD SCIENCE · South Wales

After leaving the teaching profession full time, I applied for a role in Mad Science South Wales. This gave me the opportunity to develop my teaching practices over a much larger age range, and visit a wide variety of schools across South Wales while delivering engaging workshops. I also had the opportunity to develop many new workshops and experiments during my time here. One of these was a Sustainability workshop, where in one experiment we demonstrated plastic production by turning "oil" (black PVA glue) into slime, by combining it with Sodium Tetraborate to polymerise the PVA. Another workshop was focused on Astronaut Training, where we used Bell jars and balloons to demonstrate the effects of pressure, and investigated different rocked designs and propulsion systems (making our rockets from plastic and card, and using air, water and vinegar/bicarb as propulsion).

2016–2020

Physics Teacher
YGG BRYN TAWE & NUMEROUS AGENCIES · South Wales

Upon graduating with a PGCE I immediately secured a role in a Welsh Medium school as a Physics Teacher. I had many wonderful opportunities here including redeveloping the Physics curriculum as the Head of Physics had recently resigned. However, at 22 years of age, I felt I had bigger aspirations than spending my nights marking work and left the profession (as a permanent classroom teacher) after two years. I continued to do supply work up until COVID thanks to my flexible schedule.

Education

2023–	**Applied Software Engineering** BSc · Swansea University 📍 Currently completing a full time Degree Apprenticeship funded by the Welsh Government. Dissertation is an investigation into teaching the mechanisms of DNA and inheritance through their Computer Science equivalents — with learners building a working model in Python.	
2022	**Medical Radiation Physics** MSc · Swansea University 📍 Merit Awarded First Class Dissertation: "A report evaluating the risk of unintended exposures at Swansea Bay University Health Board using voluntarily reported radiotherapy errors"	
2016	**Secondary Physics (Welsh Medium)** PGCE · University of Wales Trinity St. David 📍 Awarded with Qualified Teacher Status Placements in Ysgol Y Strade & Ysgol Gyfun Ystalyfera Dissertation: "An Investigation into Utilising 'Inference Squares' in Tutoring Pupils to Use the Techniques Required in Answering PISA Questions"	
2015	**Physics** BSc · Nottingham Trent University 📍 2.2. with Honours First Class Dissertation: "A Study Into the Accountability of Evaporation in the Mass Reduction of the Aral Sea"	

Certificates & Qualifications

2025	Adobe Cymru Create
2024	Show Racism The Red Card — Anti-Racist Training
2024	Ambassador for CyberFirst Wales
2023	NDEC CyberFirst Deliverer
2023	First Aid at Work Certification
2023	Python Advanced micro-credential
2022	Python micro-credential
2022	Minecraft Education Qualified Deliverer
2022	Safeguarding in Schools Training
2013	Full UK Driving Licence

Programming

- **python**
- **Java**
- **LaTeX**
- **HTML, CSS**
- **php**
- **Javascript**