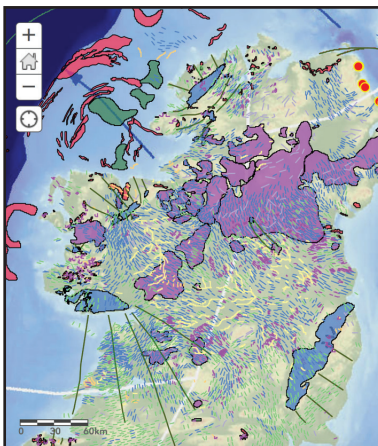


ArcGIS for Schools

Opening the door to university and employment

Highlights

- Geology and Geography lessons are more engaging for pupils of all ages
- A Level Geography students meet the requirements of the Practical Endorsement
- Use of mobile GIS apps on field trips gives pupils real-world skills
- Students are well prepared for university and employment



A map of the Game of Thrones tour sites where Karen Parks and her class visited to record the features linked to the Geology of the area.

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Pupils at Methodist College Belfast have the opportunity to use ArcGIS in the classroom, in the field and in extra-curricular activities. In these ways, they are gaining the real-world GIS skills that will give them an advantage at university and in their future careers.

Why GIS?

Affectionately known as Methody, Methodist College Belfast is one of Northern Ireland's leading grammar schools. Pupils here have the opportunity to study Geology and Geography courses at GCSE, AS and A Level, as well as participate in a wide variety of extra-curricular opportunities that strive to develop pupil's interest in university courses and careers relating to Geology and Geography.

Geology teacher Karen Parks needed to integrate the use of geographic information system (GIS) technology into her teaching with A Level students, because the compulsory 'Practical Endorsement' part of the A Level states that students must be able 'to compile and analyse geological data sets through to visualisation using GIS'. In addition, she wanted to integrate GIS into more of her lessons with pupils of all ages, to ignite their interest in GIS and give them real-world IT skills that they may need in their future studies and work. She therefore signed up to use Esri's ArcGIS platform free of charge, through the ArcGIS for Schools programme.

Benefits for students

Parks now regularly uses ArcGIS solutions and interactive maps available in ArcGIS Online, along with teacher resources prepared by Esri Ireland, to make lessons fun and engaging for pupils. For example, she helps pupils understand the potential impact of volcanoes using the ArcGIS Online Volcano Top Trumps map, where volcanoes around the world are given scores for height, deadliness, unpredictability and destruction potential. "I find that the pupils who engage well with GIS tend to get a better understanding of global issues, as they can think about them spatially," she says.

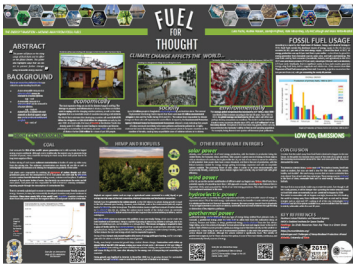
The Geography teachers at Methody will also be using Esri's Survey123 app to allow students to collect data on their smartphones while on field trips. Use of this mobile GIS solution enables pupils to record very accurate locations on maps, take their own pictures and make notes in any weather, without worrying about soggy paper. Pupils have enjoyed using the technology in the field, and Park expects to use Survey123 during all geology field work at GCSE and A Level in the incoming academic year. She says: "Using GIS in the field gives pupils an insight into the working world. Professionals in a wide range of civil engineering and environmental careers need to be able to access and use maps in the field."

Pupils have also had the opportunity to use GIS in extra-curricular activities and deepen their knowledge of GIS. For example, a group of students recently used ArcGIS as part of research to enter the National Schools Geology Challenge and also participated in the Association of Geographic Information (AGI) conference in Belfast. They used ArcGIS to explore the environmental, economic and social impacts of renewable energy sources and presented their ideas in a presentation and poster entitled 'Fuel for Thought'.

Learn more at: schools.esri-ireland.ie

“When my students go to university to study geology, geography or other related courses like civil engineering, they are not afraid to use GIS. They already have real-world GIS skills, which puts them a step ahead of other students.”

Karen Parks, Geography Teacher, Methodist College Belfast.



Students use ArcGIS to evaluate the environmental, economic and social impacts of renewable and non-renewable energy sources.

The teacher's perspective

Before starting to teach ArcGIS in the classroom and on field trips, Parks attended an ArcGIS for Schools training course organised by Esri Ireland and a GeoMentor from Esri Ireland came to Methody to deliver training workshops for some Geography and Geology students. She then took advantage of some of the ready-made resources that have been prepared by Esri Ireland for teachers to use, adapting some of them and using others straight 'out of the pack', which saved her time.

Parks has had tremendous support from GeoMentors at Esri Ireland and Queens University, Belfast, who have encouraged her and given her practical help and tips along the way. She has also benefited from help from the wider GIS community including the Geological Society Northern Ireland. "Lots of people have been very enthusiastic about ArcGIS and that has made all the difference," she says.

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