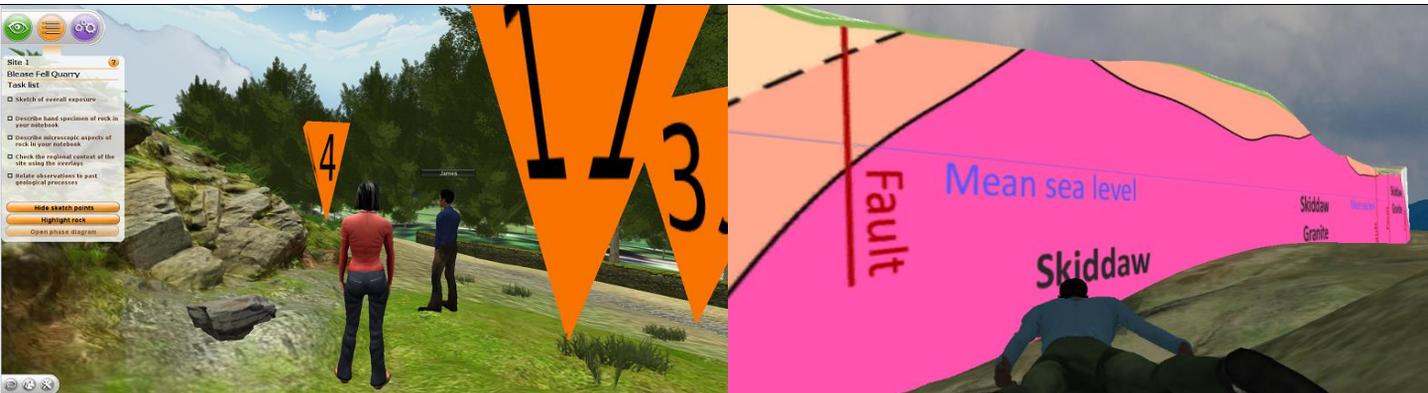


# Virtual Skiddaw

## Training Geologists at The Open University



### *Using immersive environments to train geologists through virtual field-trips*

#### REQUIREMENT

The Open University (OU) needed an alternative to providing students who couldn't attend physical trips – something better than just a set of photos and videos.

*“The response has been enthusiastic. The multi-user aspect was a feature that really opened up a whole load of new opportunities for how Skiddaw could be used, how people might interact with the environment and collaborate with each other. Another feature which I didn't initially anticipate was the equipment selection activity at the start, and linking that to random weather was a great idea” - Tom Argles, Lecturer, The Open University*

#### OUR SOLUTION

Daden created a virtual field-trip using the Unity3D game engine.

We used a variety of techniques to accurately model 100 sq km of the Lake District, including photogrammetry models of rock outcrops at 6 key sites.

The system was multi-user, as a tutor and students could enter the environment together, and interact, or students could go in “solo” and have a pre-recorded audio narration from the tutor.

As well as doing “realistic” activities, the system also let the student fly around the area, lift up a cross-section of the underlying rock, and replace the aerial photography drape with an OS map or geology map.

#### RESULTS

The application is now in regular use of the OU Geology course. Feedback included “several students had actually been to the area on fieldwork and were impressed with how lifelike it was” and “countless users have said that schools would love this!”.

The OU won the Times Higher Education (THE) award for Outstanding ICT Initiative of the Year for their Open Science Lab in 2015, which included the Virtual Skiddaw project.

#### FUTURE DEVELOPMENT

Daden and the OU teamed with the Field Studies Centre and DesignThinkersUK to win funding from InnovateUK to develop the Fieldsapes system as a way to extend this idea across the whole of education.