During 2007, a deaf project team worked to find 250 scientific signs for English words used in Scottish secondary schools. The participants were Deaf, fluent in British Sign Language from a young age and with scientific knowledge at degree level or above. In this paper we discuss the process and the dilemmas we faced as we worked to make definitions in BSL. Our paper will address issues about the methods we used, gathering data from reflections by participants throughout the project and afterwards. We will compare this with other projects we have had contact with in the UK and internationally. We will examine the processes that were happening linguistically as we agreed on signs, drawing on the late Dr. Mary Brennan's work on BSL sign formation. We will assess the educational impact of the project, using evidence from deaf school pupils, teachers of deaf children and Communication Support Workers or Educational Interpreters. This can be a difficult area for teachers, as they are not required by law to have more than a basic knowledge of sign language. Does this online resource empower or threaten teachers of deaf children? How does the existence of fluent BSL explanations of complex science concepts change these teachers' views about working with deaf colleagues or improving their own signing skills? Finally, we will evaluate the handshape access we wanted to provide and the continuing challenge this presents.