



Spectacular Sprites: Teaching cutting edge research in higher education

M. Fullekrug, I. Astin, A. Taylor, A. Goodwin, S. Hillier and M. Dolan
University of Bath

A fundamental challenge in higher education is motivating students for complex scientific subjects. The instructors' attempt to communicate with rigour and detail is often perceived by students that the subject is too difficult and inaccessible.

Sprites are newly discovered giant lightning discharges above thunderstorms with spectacular visual and audible effects. This paper describes how student motivation regarding sprites is enhanced using multi sensorial communication strategies that explore visual, audio, read-write, kinaesthetic (VARK) learning styles and real-world experience to increase the accessibility of the subject matter.

The newly developed assessment protocol includes that the students share their lecture notes on line with colleagues and teaching staff. This is a powerful strategy for all to engage with each other's understanding of the topic and to complement, clarify and/or correct the notes. The revised lecture notes co-created by students and staff will ultimately be compiled as a comprehensive booklet accessible to all, further enabling a feeling of group ownership. The assessment thereby increases focus and the sense of purpose. The staff gains from learning the common difficulties presented by the subject matter whilst the time staff spends assessing project work is effectively reduced.