

GCSE Bitesize Computer Science

Bill Sellars on off-the-shelf software

My name's Bill Sellars and I work at the University of Manchester as a zoologist. And what I do is I create 3D dinosaurs as computer models.

The 3D dinosaurs we produce move realistically and so they are absolutely ideal for people producing computer games or for the movie industry. We use the computer to create a virtual robot and this is mechanically accurate so the results that we produce are scientific reconstructions of the mechanics of the animal. So they are not just my opinion, they are actually based on real data.

The main computing skill that we use is programming because we have had to write our own software to do this. No-one sells dinosaur reconstruction software off the shelf and so we have to write our own from scratch.

The dinosaur models we create are standard computer-aided design mesh models and we render them using a 3D engine which takes the 3D-shapes and converts it into something that you can see on the computer screen. And so we specify the 3D geometry of the dinosaur and you specify the surface properties and what colour you want it, and then the computer does the geometry to convert that 3D model into the bitmap that you see on the computer screen.