

## COMPANY

**Archbishop Holgate School**

## LOCATION

**York, England**

## SOFTWARE

**Autodesk® Fusion 360™****Autodesk® 123D® Make****Autodesk® Showcase®**

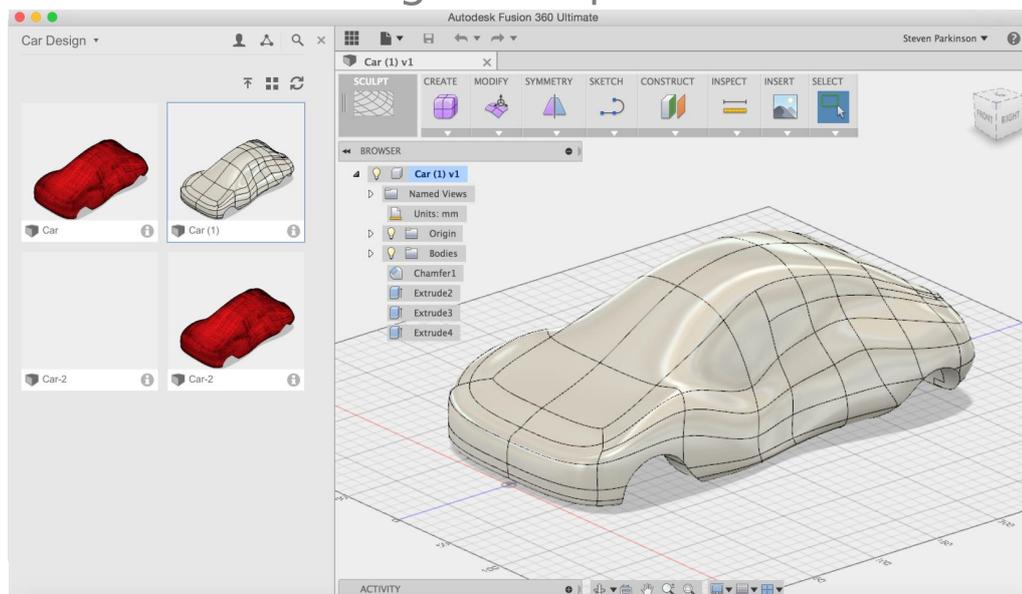
# Autodesk helps open a whole new world of opportunities for U.K. student

## Design software enables Andrew Spencer to overcome challenges and pursue his dream

Andrew felt as though he was better than that, and it was almost as if the British school system said, "Unfortunately, you're not an intelligent person, or you're not as intelligent as other people. Therefore, you're going to struggle to get a good grade." This made Andrew passionate about wanting to get beyond it.

—**Steven Parkinson**

Design and Technology Teacher  
Archbishop Holgate School



Andrew Spencer's concept car, designed in Autodesk Fusion 360  
(Image courtesy Archbishop Holgate School)

### Autodesk's emphasis on education creates a connection between classroom and career

Autodesk is heavily involved in education programs around the world, offering products and learning content and curriculum for STEAM subjects—that's science, technology, engineering, arts, and math. Autodesk supports teachers with new approaches to project-based learning, and helps students see the connection between the classroom and careers in STEAM-related fields like architecture, design, engineering, and digital arts.

In one school in the historic city of York, England, Autodesk® technology—particularly Autodesk® Fusion 360™ software—dramatically altered one student's educational journey and opened doors to his future career. With Fusion 360 he was able to design, render, and create, helping him to pursue a dream many didn't think possible.

### The challenge

Andrew Spencer was 17 years old and in his final year at Archbishop Holgate School. He was trying to design a futuristic concept car in his Product Design class, but was struggling to achieve the organic shape he wanted. Using established CAD tools, the car looked blocky and unsophisticated. The traditional "loft and sweep" design methodology was incredibly time-consuming. He knew he needed to change his approach to his CAD design if he was ever going to get the results he wanted.

Steven Parkinson, a design and technology teacher at Archbishop Holgate, says Spencer had struggled with severe dyslexia throughout his academic career. "Typically, in exams, he would have somebody sit with him," says Parkinson, "and that person would read the questions from the exam paper." Standardized tests predicted Spencer should get a D or E in Product Design. But Spencer wanted more than that—he wanted to design cars.

# Student who struggled to read throughout his school career headed for university after creating with Autodesk software

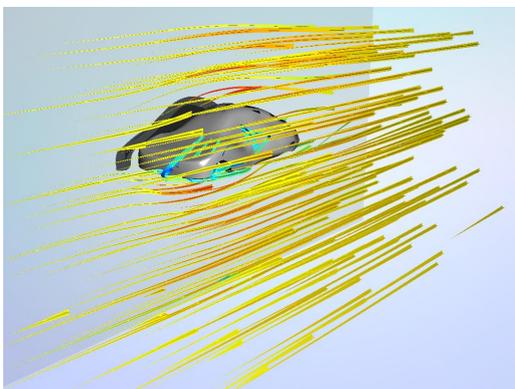
## The solution

Parkinson remembers the first time Andrew encountered Autodesk Fusion 360 while working on an automobile design. "It was a winter's night, actually. Quite cold. I showed him a couple of tools, probably a 60-second demonstration, and then I handed it over to Andrew. Within 10 minutes, he already had something incredibly similar to what he wanted to achieve, a huge amount of it already complete." Parkinson says this encounter was memorable because it ultimately changed Andrew's life.

## Autodesk design tools a perfect fit

The reason Fusion 360 was such a game-changer for Andrew is the same reason it's such a boon for any designer. The software enables users to design, render, and create in one program, as well as providing powerful sculpting and modeling tools. These were especially helpful for Spencer, who because of his dyslexia had always struggled with reading. Parkinson says that working with Fusion 360 enabled Andrew to create in a way he hadn't been able to before. "The software works in a similar way to how his own mind works," says Parkinson, "and a lot of the text and unnecessary layered information was just removed."

Andrew used Autodesk® 123D® Make software to generate CAM files, and then quickly manufacture prototypes on CNC routers and laser cutters. He also used Autodesk® Showcase® to generate final renderings of his car, and built-in Flow Design software to modify the aerodynamics. The result is an impressive portfolio to present as he visits universities. A representative at the Loughborough Design School commented that Andrew showed graduate-level work. His designs also got him a



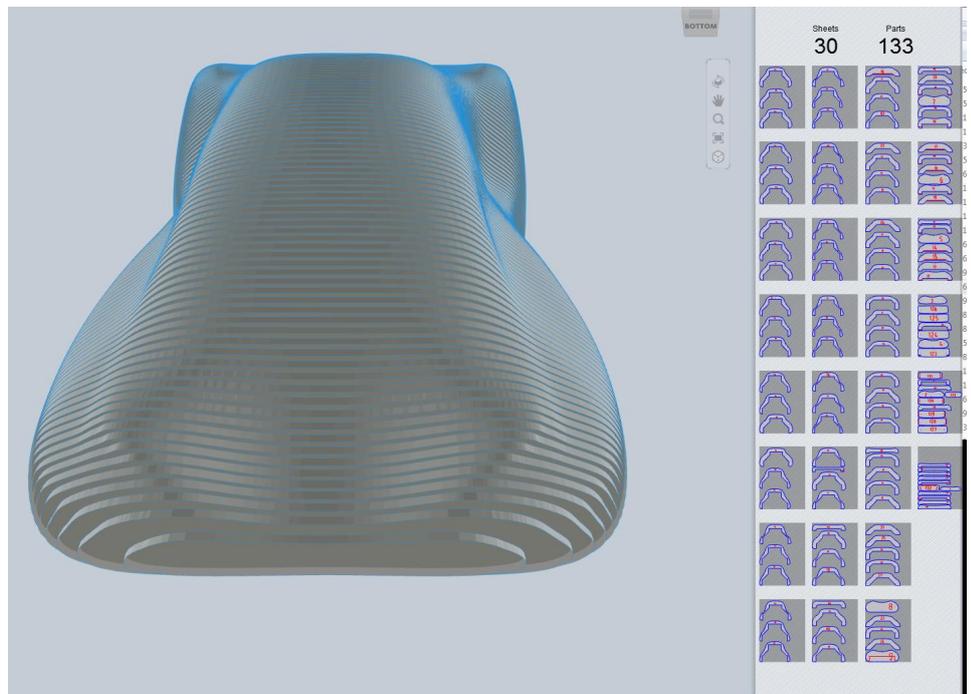
Flow Design gave early insight into the aerodynamics of the car  
(Image courtesy Archbishop Holgate School)

meeting with legendary British car-maker Aston Martin, who say they want to keep in touch with him as he pursues his studies at university.

Instead of the D or E grade that was predicted for him, Andrew Spencer got a B in his Product Design class. He's going on to university to pursue a degree in automotive design, something that was far from a sure thing until recently. Steven Parkinson says he always believed that Andrew just needed to find his own path to what Parkinson calls a "life-changing" result. "For Andrew, the answer was using the digital tools. My job is to inspire people. I didn't show him how to design cars. I just showed him where to find the tools that he needed to do well."

## The result

Autodesk's involvement in education brings professional-level design tools into the classroom—entirely for free.\* This can have a profound effect on a student's learning experience. Developing skills now in next-generation tools used by the pros makes students attractive and hireable in the future. Autodesk's partnership with Archbishop Holgate School helped student Andrew Spencer pursue his ambition of going to university to get a degree in automotive design—one step closer to securing the career of his dreams.



Spencer used Autodesk 123D to make CAM files to make a prototype using the laser cutter  
(Image courtesy Archbishop Holgate School)

Without using Autodesk software, Andrew would never—and he'd be the first to admit it—he would never, ever have been able to appreciate or calculate the physics involved with his car. I think he's got a fantastic result, a life-changing result.

— Steven Parkinson

Design and Technology Teacher  
Archbishop Holgate School

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