

# **Bringing Learning to Life**



#### Shelfield Community Academy

"We knew that a 3D learning solution would dramatically enhance our teaching processes and develop students' learning skills in a way that cannot be compared to the traditional text book approach."

> Bernard Dickinson Principal, Shelfield Community Academy



The human heart—from Gaia's 3D Content Library

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## 3D Learning—

### an Exciting new Teaching Tool for Schools

Shelfield Community Academy is the first school in the UK to work with Gaia Technologies to embrace and develop the use of 3D technologies in the classroom. Through the implementation of 3D lessons, the school has seen a dramatic improvement in student participation, retention and comprehension.

Gaia have developed a wide range of 3D learning content in partnership

with teachers and students. This content covers the breadth of the curriculum and some of the vocational courses. The content library is available for use and is packaged with the Gaia 3D Viewer. Gaia also offer a wide range of 3D hardware solutions for large spaces, classrooms and individual users.



Shelfield Community Academy -

the first school in the UK to embrace 3D Visual Learning Systems.

Specialising in English and literacy, sport and physical education,

Shelfield Community Academy is part of the Ormiston Academy Trust, which strongly believes that children should be empowered to maximise their potential through the removal of barriers to learning. One of the aims of the Trust is to raise educational standards by building a world-class network of innovative, high performing secondary schools in partnership with the wider community.

As an Academy, Shelfield has the independence to deliver the curriculum of its choice and adopt the latest technologies and innovative solutions to enhance and improve its pupils' learning experiences. With this in mind, the Academy decided to partner with Gaia Technologies for the design, development, implementation and support of its unique 3D Immersive Visual Learning System.



Shelfield Academy students have access to a wide range of 3D files covering sporting activities from rugby and football to ballet and yoga. This allows students to observe and understand the mechanics required to perform these activities and create their own animation sequences.

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## An Innovative Approach to Learning



"Gaia is genuinely eager to help our students learn and works closely with the Academy to change the way our students interact with teaching and learning."



Gaia's 3D Content Library covers all areas of the curriculum

"Teaching in 3D eradicates the time lost in lessons. Using the 3D learning solution I can teach 30% more than I can in a normal classroom!"

Michael Murphy Head of Humanities Faculty, Shelfield Community Academy

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## An Innovative Teaching Solution

"Gaia's 3D Immersive Visual Learning system changes the dynamic of learning as students learn through observation rather than by instruction," explained Anas Mawla, Gaia Technologies' Managing Director. "By using our 3D visual learning solutions, teachers spend less time explaining, as students are able to understand complex relationships and techniques through individual observation. Gaia has brought expensive technology to affordable levels well within the reach of educational establishments."

"From the outset, this has been a real partnership," explained Bernard Dickinson, the Principal at Shelfield Community Academy. "We knew that a 3D learning solution would dramatically enhance our teaching processes and develop students' learning skills in a way that cannot be compared to the traditional text book approach. We wanted an organisation that would work with us, providing the hardware and support and developing custom 3D resources in line with our curriculum objectives."

#### **Impressive Flexibility**

Shelfield has been impressed with the flexibility of Gaia Technologies from the early stages of the project. In addition to their in-depth experience, Gaia engineers and consultants fully understand the unique requirements and objectives of the Shelfield teaching staff.

"The partnership is extremely productive," added Bernard Dickinson. "The combination of innovative technology, staff input and Gaia's ability to deliver has resulted in an incredible teaching solution."

Michael Murphy, the Head of Shelfield's Humanities Faculty, agrees: "Gaia provides an outstanding service on many levels, but their communication skills are first class," he continued. "Gaia is genuinely eager to help our students learn and works very closely with staff across the Academy to change the way in which our students interact with teaching and learning."

But it's not just about changing how students interact with teaching and learning. Shelfield's 3D Visual Learning Solution is substantially enhancing the way in which information is absorbed by students. Shelfield's students were born into a world that embraces visual media. Computers, game platforms and mobile phones are a natural part of their lives and



The 'Wow' factor: 3D learning sponsored by Gaia has been enthusiastically welcomed by Shelfield students.

the transition from traditional text book teaching to a 3D Visual Learning experience is enthusiastically welcomed by the Academy's students.

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## **Immersing Learners in Engaging Environments**



"3D isn't a gimmick. It allows us to develop skills within our students far more effectively. It has changed the way we teach: students can learn at a faster pace, the whole process is more effective and efficient, and we can improve students' abilities to understand and learn."

Bernard Dickinson, Principal, Shelfield Community Academy



The animated volcano structure is a valuable resource for teachers

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### A Real Learning Experience

Shelfield has found that teaching in 3D provides students with an entirely new experience where they are more engaged and productive.

"Teaching in 3D eradicates the time lost in lessons," continued Michael Murphy. "A lesson that would normally take 60 minutes can now be conducted in 35 minutes, leaving almost half the lesson period available to expand on what has been learned. Using the 3D learning solution I can teach 30% more than I can in a normal classroom!"



An image from the 'Great Plague' 3D environment. Using resources like these, students show dramatic improvement and have more fun learning.

The initial Shelfield 3D learning solution implementation, including a wide screen, stereo sound and the core 3D projection system, has been installed in a dedicated suite. Teaching staff book the facility in advance whenever they need it, although the system has proved so popular with stu-

dents and staff that classroom-based lessons often decamp to the 3D centre so that the subject being taught can be explored in more detail.

"Students are all engaged and excited to be learning. You can visibly see the

participation increase when we walk into the 3D suite. Students who are engaged are much more likely to recall and retain information and that is what teaching is all about," added Mr Murphy.

"A recent geography class used the 3D suite to focus on volcanoes. While discussing the structure and function of a



Shelfield's 3D system is used to explore Roman architecture and the Roman way of life.

volcano, one student brought up the subject of Pompeii. We were able to naturally flow on with the lesson, using the 3D system to explore Pompeii and walk the students through a Roman town. You just can't achieve that level of interaction using traditional text books," explained Mr Murphy.

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ommunity Academy

# **Continually Developing 3D Within the Academy**

# **Branching Out**

The success of the 3D learning solution and the impact that it has had on both teachers and students has encouraged Shelfield to evaluate the practicalities of replicating its 3D learning solution across other parts of the Academy so that it can be used as a day-to-day teaching tool in classrooms.



Geothermal Plant— Animated model showing the process of electricity generation.

"We initially saw our 3D resource as playing a key role in teaching complex subjects, such

as science where it can be difficult to describe a concept," explained Lisa Barton, Shelfield's Head of 3D Learning. "However we found that our students have really engaged in 3D so we are working very closely with the Gaia team to create new resources to enhance our overall curriculum."

## Changing the Way We Teach

Shelfield Community Academy is developing the 3D concept further across the curriculum. It sees the 3D learning platform as the natural way forward in helping students learn and gain an understanding of subjects, and plans to expand its use of this new and highly successful teaching tool across all departments.

"3D isn't a gimmick," concluded Bernard Dickinson. "With Gaia's help we have thoroughly investigated the whole concept and have developed our approach to learning using 3D in particular to help students appreciate concepts and understand more easily how things interrelate. 3D allows us to develop skills within our students far more effectively. It has changed the way we teach: students can learn at a faster pace, the whole process is more effective and efficient, and we can improve students' abilities to understand and learn."

"Gaia Technologies is leading the way in this technology and supporting the Academy in the content creation and development of the hardware and software used in this incredible teaching tool."

## The Results Are In

Shelfield Academy Benefited From:

- Enhanced understanding of complex issues
- Teachers can cover 30% more than in a normal classroom
- Increased student participation
- Teachers spend less time explaining
- An effective and efficient teaching process that improves students' abilities to understand and learn
- Expensive technology brought to affordable levels
- Partnership with UK's leader in 3D Immersive Visualisation Systems

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3D Visual Learning Solution plays a key role in teaching complex subjects where it can be difficult to describe a

concept



Students are able to observe objects in full detail and from all angles

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