

Acle High School

Outline of Project - Acle is a growing school and the buildings are too small for the number of pupils. We wanted to design a whole new school that had a feeling of space and was cutting edge in terms of science and technology. Graphic Products students in Y10 designed the layout and structure of the school. Systems and Control students in Y10 designed computer controlled details of the buildings, making the school an 'intelligent building'.

Outcomes - Graphics students competed with each other to generate design bids for the whole school. Both they and the architect chose the best design and the group was split into design teams - each to develop a department of the selected school. They developed scale models and 3D drawings of the interior of the departments. The most enthusiastic students developed a 1:100 scale model of the whole school. Systems and Control students developed models for departments of their choice that used micro-processors (PICs), mechanisms and light materials.

Curriculum Links

- D&T - Links between Graphics and Systems/Control GCSEs with outcomes showing work from both areas.
- Maths - Calculating scales and surface areas for floors in the buildings.
- Literacy - Debating, writing presentations and descriptions of work.
- ICT - CAD/CAM, word-processing.
- PSHE - Teamwork, self-criticism, presenting work to others.

Raising Standards - Having a 'real' deadline and goal helped to galvanise the students' efforts and motivated every member of the groups. Introducing an element of competition (as in the 'real world' of design) pushed more able pupils to produce even better work. The quality of the architects' models inspired pupils of all abilities.

Benefits to Pupils, Staff and School - Their presentation in The Forum acted as an excellent platform to promote the work of our pupils. Pupils gained experience of a range of skills and an understanding of the nature of architecture. The teacher slept well at night.

Sustainable and Environmental issues covered - Environmental impact was a key issue in design and resulted in the skyscraper solution. The creation of an 'intelligent building' ensured efficient use of energy for heating and air-conditioning.

Additional Comments - We are very grateful to Simon Redman for his enthusiastic involvement in this project and the quality and range of work he demonstrated. All pupils have benefited greatly from this experience.

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Sustainable and Environmental issues covered

We talked about uses of materials which would 'fit in' with the environment in terms of material and colour.

Additional Comments

Many thanks to Matthew Wood for bringing his expertise and enthusiasm to our school. We now have some budding architects! The children felt so proud of themselves for having their work displayed in The Forum, and many parents attended. We had a brilliant time.

If you would like this document in large print, audio, Braille, alternative format or in a different language please contact Margaret Coard on 01603 433276, and we will do our best to help.



Celebrating Success in Norfolk Schools Architects in Schools 2004

The Architects in Schools 2004 initiative, supported by CITB, the Norfolk Association of Architects and The Exchange, and led by Norfolk Education Advisory Services, provided a unique opportunity for Norfolk young people to work with professional architects to improve their learning.

The successful outcomes are celebrated in this publication for all schools in the LEA to enjoy.

Advisers involved in this programme: Mike Hodgkinson and Chris Hemmings
They can be contacted on Tel: 01603 433276

Architects involved:

Acle High - Simon Redman
Caister Middle - Steve Holtz
Cavell First and Nursery - Jim Bond
Manor Field First - Gillian McArthur
East Harling Primary and Nursery - Matthew Wood



East Harling Primary School and Nursery

Outline of Project

To design a sensory garden and maze for part of our field which was under-used. We wanted to create a different 'area' to be used by both infants and juniors. We are lucky in that we have an amphitheatre and a conservation area, but one corner of our field is under-used. We wanted to create an area for learning, fun and relaxation, all based on a theme of the senses. We included a ground-level maze too.

Outcomes

Wow! We have learnt so much! Firstly, it was important for the children to understand the space we had, and work to scale in all of our designs and models. The children worked with Matthew Wood, who was a fantastic resource - they learnt about elevated sections when planning. He also talked to the class about roof structures, which enabled their final models to be strong and sturdy. Children worked as groups to evaluate others' designs and decide what would be the final plan.

Curriculum Links

- Maths - measuring, drawing to scale.
- ICT - word-processing, using the digital camera.
- D&T - using a range of tools including saws and glue guns, fixing methods, awareness of strong structures.
- Literacy - speaking and listening about ideas and decisions, writing reports on the project so far.
- History - types of roofing through the ages.
- Art - bringing in an aesthetic aspect (use of sculpture and pattern).
- PSHE - collaborative work, valuing opinions, understanding of working as part of a group.



Raising Standards

Children really have raised their awareness of the work that goes into a building project before any building takes place. Their designing skills have benefited in that they are more realistic and think ideas through more thoroughly, and with more of an idea of materials.



Benefits to Pupils, Staff and the School

The children absolutely loved the project! They took responsibility for all of the designing and planning stages. They have been able to 'run with' ideas



rather than being constrained. Because of their enthusiasm for the project, their interest in other areas of the curriculum was increased. The status of D&T in school has been raised.

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Manor Field First School

Outline of Project

For Year 3 to design and make a model of a renovated school wildlife area.

Outcomes

The children learnt to work cooperatively, and to use a wide variety of tools and techniques.

Curriculum Links

- Maths - measuring, scale work, 3D and 2D shapes.
- ICT - Smartboard, digital camera, using the internet for research.
- D&T - planning, designing and making models. Evaluating and modifying. Choice of resources, structures, using tools and materials.
- Art - creativity and imagination, colour mixing.
- PSHE - cooperation, debating, valuing each others' ideas.
- Science - environmental impact, conservation issues - renewable energy sources.

Raising Standards

Cooperation, teamwork, working to schedule, design skills, environmental issues, pride in their work. Active involvement in their own and others' work - purpose to learning i.e. exhibition in The Forum.

Benefits to Pupils, Staff and the School

Children developed an understanding that skills learnt at school are needed for adult life and jobs. Some children are now aspiring to become architects.

Sustainable and Environmental issues covered

Renewable energy, respecting the environment, aesthetically pleasing structures and the diversity of plant and animal life.

Additional Comments

Lots of very hard work for the staff and the architect Gillian McArthur. The project gave the children an opportunity to use their imagination.

Cavell First and Nursery School

Outline of Project

To design creative features to enhance the outside environment of the new school that was being built. This would also be part of a project to go on general display at the school celebrating the life of the old and looking forward to the new. Hopefully, designs from this project could actually be used in the landscaping phase of the new school. There is some money set aside by the Friends of Cavell to enhance the outside play area of the new school.

Outcomes

The children really loved the idea of being involved in thinking about projects for the new school. They enjoyed working with the architect Jim Bond who encouraged them to let their imagination flow, but also pointed out practicalities, especially those linked to the Health & Safety aspects of design.

Curriculum Links

- Literacy - speaking and listening, reporting, making notes, lists, instructions and reports, labelling.
- Art - creativity and imagination, selecting and using a range of materials, choosing and mixing appropriate colours.
- Science - investigating the use of different materials.
- ICT - word-processing, use of digital camera.
- Maths - measuring, scale drawing and modelling, estimating.
- PSHE - cooperation, teamwork.
- Geog. - maps and plans, direction, location.
- D&T - planning, designing and making models, evaluating and modifying, safe ways of working.

Raising Standards

Children were actively involved in their own learning, they saw a real purpose to their designs which they were keen to communicate to others. It was great for their confidence to see the models completed and on show.

Benefits to Pupils, Staff and the School

A good sense of achievement, especially in seeing the work displayed in The Forum. It was then displayed on school open days organised to celebrate the old school, but helping to give focus for the future on the new school.

Additional Comments

Jim Bond gave up extra time of his own for the project, we are very grateful to him. The next part of the project is to translate some of the children's designs into reality, especially the chill out space with swimming pool and jacuzzi for the teachers!

