



# Collegiate High School, Blackpool

## Sailing through my maths

### Why make the visits?

Over a six-week period, Collegiate High School, Blackpool, took 12 year 10 pupils to Stanley Park Lake for two hours each week. The aim was to provide 'hands-on' outdoor application of the GCSE maths curriculum to pupils who found maths difficult. Initial classroom explanatory activities were undertaken in the boathouse followed by consolidation with boating activities on the lake. This included students canoeing on the lake to measure speeds, bearings and distance, and using sails on shore to measure angles, lengths and to calculate areas.



### How did they plan the visits?

Maths department teachers worked with local authority (LA) outdoor education and health and safety colleagues, along with a maths consultant, to explore links to the curriculum. Planning the logistics of the visit and health and safety considerations were also addressed. The issues they identified included:

- getting the students to the park;
- safety around water;
- using canoes;
- hygiene issues, eg water quality and goose excrement;
- management of a challenging group of pupils in an unfamiliar environment; and
- weather conditions.

### How did they manage the risks?

Teaching staff were responsible for behaviour and group management issues, while the LA education staff covered the technical aspects of the activities and the suitability of the site.

#### *Transport*

The school used its own minibus and a qualified driver to take the pupils to and from the school.

**Water safety basics:**

- pupils' swimming capabilities were established in advance;
- water rescue equipment was available and staff were trained in water rescue; and
- pupils were briefed about the risks and how to keep safe around water during the boathouse classroom lessons.

When using the canoes, pupils:

- were provided with buoyancy aids, which they put on before leaving the boathouse to do the practical sessions on the water; and
- learnt how to control the canoes, which were rafted together to begin with. As their skills and self-confidence increased, they undertook a wider range of activities in single canoes. Those with less confidence were more closely supervised; and
- wore sensible footwear and appropriate clothing. Spares were available in the event of mishaps, but were not required.



**Hygiene issues**

Hot water, soap and anti-bacterial hand gel were available within the boathouse.

**Supervision**

In addition to having a qualified canoeing instructor present, there was a high teacher:pupil ratio (one adult to every two–three pupils).

**Weather**

The forecast was checked before each session and activities tailored to conditions.

**Basics**

Pupils understood the school's expectations and their own responsibilities. Inappropriate behaviour was dealt with swiftly.

**What was the result?**

Students responded positively to this novel approach to learning. They developed a greater understanding of maths and its application in practical situations.

As well as improving their maths capabilities, pupils gained additional new skills, such as sailing, canoeing and boat control etc.

Teachers, LA personnel and others worked together to successfully deliver an innovative learning experience, with the desired results, to a challenging group of pupils.

***Sheila Hirst, Secondary Maths Consultant, Blackpool LA, said:***

'The students were able to study mathematics in a much more practical and functional manner than is normally possible. They developed a greater understanding of what mathematics means and how to apply the skills they learned. Also, they have enjoyed getting out in the canoes and learning to control the boats.'

***Andrew Nickson, Year 10 Learning Mentor, Collegiate High School, said:***

'There are inherent risks associated with this type of adventure training activity. However, with the facilities and equipment used, coupled with the experience of the diverse staff team participating, the levels of risk were greatly minimised and the students did enjoy the programme with successful end of year exam results in the subject.'