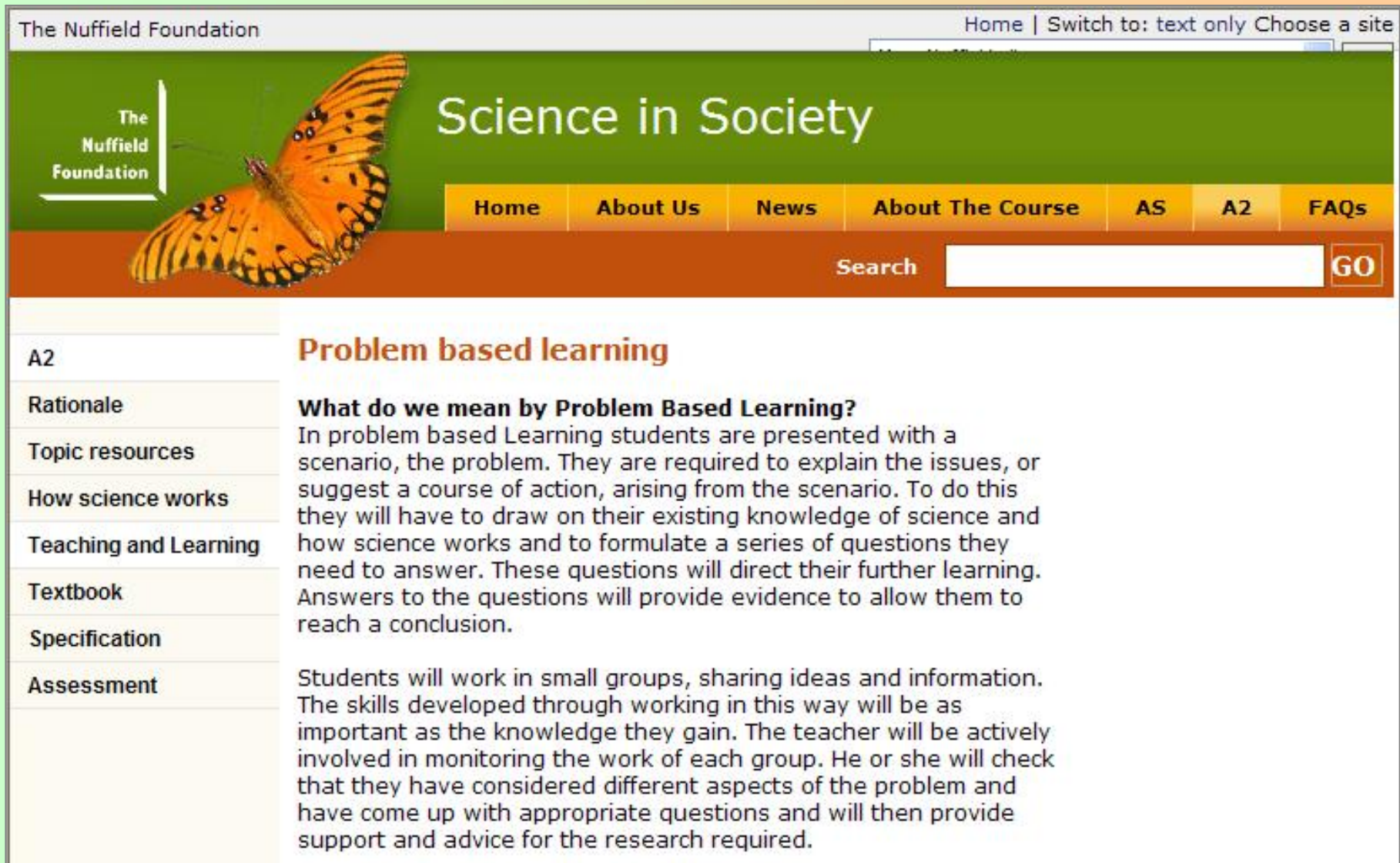


Problem Based Learning



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A2	<h3>Problem based learning</h3>
Rationale	What do we mean by Problem Based Learning? In problem based Learning students are presented with a scenario, the problem. They are required to explain the issues, or suggest a course of action, arising from the scenario. To do this they will have to draw on their existing knowledge of science and how science works and to formulate a series of questions they need to answer. These questions will direct their further learning. Answers to the questions will provide evidence to allow them to reach a conclusion.
Topic resources	
How science works	
Teaching and Learning	
Textbook	
Specification	
Assessment	Students will work in small groups, sharing ideas and information. The skills developed through working in this way will be as important as the knowledge they gain. The teacher will be actively involved in monitoring the work of each group. He or she will check that they have considered different aspects of the problem and have come up with appropriate questions and will then provide support and advice for the research required.

Problem Based Learning

Why use Problem Based Learning in A2 Science in Society?

Problem based learning better reflects the way problems are dealt with in the modern world. It is also particularly appropriate in this A2 course in which the emphasis is not on learning neuroscience, earth system science or ecology, but rather on exploring these contexts as a questioning lay person to understand better how science works. We want students to examine issues with an inquiring mind and thus to appreciate the strengths and limitations of science as we seek solutions to contemporary issues.

Challenging problems, including those related to science in society, rarely present themselves in the form of specific questions - rather they are issues or situations/scenarios that need dealing with, and which need to be distilled into questions. One of the main skills in PBL is for students to identify the main questions posed by an issue, and to refine those questions through further study.

PBL is also a response to the vastly increased availability of information, so learning no longer depends on the teacher's fund of knowledge. The teacher is more of a guide and facilitator.

This type of teaching/learning is increasingly being used in universities, with the student taking more control of their own learning. These activities will help students to learn the necessary skills.

Problem Based Learning

The process

The process involves 6 stages over 2/3 lessons.

Stage 1 Question writing - Class work in groups,
The students are presented with the scenario and spend time in discussion, understanding the problem, sharing ideas, formulating the questions that need answering and planning how to do this. The group will discuss their ideas with the teacher.

Stage 2 Resources - Class work in groups Acquiring the resources needed. Dividing up the questions amongst the group to be answered.

Stage 3 Answering the questions - Independent work possibly as homework, using the resources provided, plus independent research, to answer the questions and modify them if needed.

Stage 4 Response to the problem - Class work in groups
Discussion in class; considering the answers to the questions. Putting all the information together into a coherent argument.

Stage 5 The product - Class work in groups Writing the final report or presentation.

Stage 6 Evaluation of the process - Whole class discussion/ group work.

Last updated: 4 December 2008

