

new styles of chassis. An aluminium lorry frame is now being subjected to vibrations calculated to be those from a typical minor road in Britain, and it is hoped to weed out design faults (or design excesses) without extensive road trials.

Although the focus of attention for carbon fibres has been in aircraft applications, the NEL is keen to explore the potential of fibre composites for building simple structures. One outlet for this is in sports equipment, for objects such as golf clubs and squash rackets, and an experiment has shown how the peculiar distortions suffered by a squash racket can induce unusual fractures in a fibre reinforced object. Another fibre reinforced device pioneered at the NEL is a measuring frame which may be mounted on a lathe so as to carry a probe for tracking the diameter of a large roll. This is one of a range of light, stiff measuring tools being developed.

An attempt is also being made to coax smaller firms into using computer aided design. The NEL has started a regional experiment in computer aided design in which participants may use the NEL Univac 1108 computer free of charge for a limited time in return for contributing to the program library and providing their own on line equipment. A scheme is also under way to teach computerized production control at the new Birniehill Institute, a training centre adjoining the NEL and associated with Strathclyde University, in which postgraduate students and people from industry may study engineering design and the control of advanced machine tools. Several new concepts are being taught in group technology—in which a whole family of components are manufactured together—and in workshop scheduling. A bureau service is being provided for a computer program in workshop analysis and scheduling from the Atomic Energy Research Establishment, Harwell.

TERATOLOGY

Another New Society

A GROUP of scientists with a common interest in congenital malformations has formed the European Teratology Society (ETS), which begins its formal existence on October 1. Although some people might say there are too many societies already, the founders of the ETS are convinced that there is an urgent need for such an organization in Europe. The problem is that people working in teratology are scattered throughout the different disciplines of universities and in hospitals, government institutes and the pharmaceutical industry. They badly need a forum for discussion and self-criticism, according to Dr J. B. Lloyd of the University of Cardiff, one of the founders of the new society.

The decision to form the ETS was taken a year ago during the international conference on congenital malformations at the Hague, and enquiries made since then have brought in more than four hundred favourable responses. Since January this year, a literature search has been in progress, on behalf of the society, at the Karolinska Institute in Stockholm. This is known as *Teratology Lookout* and at present has about five hundred people on its mailing list.

Stockholm is to be the home of the ETS, and its acting secretary is Dr K. S. Larsson who works in the Department of Anatomy at the Karolinska Institute.

There is to be no new journal to go with the new society; members are to be advised to support *Teratology*, the journal of the Teratology Society, which is the American cousin of the ETS.

As a first move in this direction the abstracts and free communications of the first meeting of the ETS will be published in *Teratology*. The meeting is to be held at Cardiff from April 14 to 16 next year, and will include three symposia on topics which are intended to indicate the scope of interests embraced by the society. A distinguished group of teratologists, including the president of the ETS, Professor H. Tuchmann-Duplessis of the Faculty of Medicine in Paris, will give contributions on the aetiology of human birth defects; the problems involved in screening drugs for potential teratogenic properties, and the management of spina bifida. Further information about the meeting can be obtained from Dr J. B. Lloyd, Department of Biochemistry, University College, Cardiff.

EDUCATION

Nuffield on Trial

from a Correspondent

A PREVIEW of the sixth form course in physics, to be published by the Nuffield Advanced Physics Project early in 1972, was provided in Birmingham last week. The occasion was a conference held by the education group of the Institute of Physics and the Physical Society. The principal purpose of the meeting was to discuss the implications of the new course for higher education, and about seventy institutions, universities, technical colleges and colleges of education were represented.

The organizers of the project, Dr P. J. Black (University of Birmingham) and Mr J. M. Odgborn (Chelsea College of Science and Technology), explained that they had selected for the course a set of topics which could be inter-related so as to do justice to the principal themes and types of thinking in physics. The course is now being taught in eighty-five schools and two technical colleges, and teachers from five schools described their experiences. Their principal message was summed up by Mr A. L. Parker (Banbury School) who said that his role had been changed so that he saw himself as a leader of a group who, with careful guidance and a great deal of support material, were discovering physics. Miss B. M. Jennison (Godolphin and Latymer School) commented on the emphasis in the course on promoting discussion among students: patience and persistence were needed in the face of initial diffidence or resistance, in order to build up habits of questioning and discussion in the classroom.

The change in attitude and approach to science which the course seemed to be promoting was stressed by three speakers from universities, who were attempting to assess its implications. Dr B. J. Brinkworth (University College, Cardiff) had several criticisms, but felt that the strengths of the course—its structure, the emphasis on a few important themes, the use of experimental work, the use of order of magnitude calculations and the attention devoted to models and concepts—augured well for the quality of future students.

Professor G. Carter (University of Salford) was more pessimistic, feeling that, although school science