

SUMMARY OF LABORATORY EXERCISES

The whole range of kits produced by the Kenya Science Equipment Production Unit (SEPU) was displayed together with a small number of items from the science kits of the National Council of Educational Research and Training (NCERT) of India. The kits from both countries were accompanied by manuals for students and teachers. A few experiments were set up using these kits. Participants were encouraged to try to use the equipment in much the same way that a student might.

Discussions

In assessing how students in the Caribbean might cope with the kits and the accompanying manuals, participants were guided by the following questions:

- (a) How well could school children in the 11-14-year age range assemble the apparatus?
- (b) How appropriate would the manuals be for students and teachers of the 11-14-year-olds?
- (c) Could the kits and manuals be adopted in the Caribbean?

The discussions revealed that the kits have much relevance to the educational scene of the Caribbean. Facilities for teaching and learning bear much resemblance to the situations for which the SEPU and NCERT kits were produced. With little modification the kits would be suitable for upper classes in all-age schools and in junior (lower) secondary schools. Participants thought many of the secondary schools are, at present, fairly well equipped for their present purposes. However, even at this level of education, the flexibility of the multi-purpose components of the SEPU and NCERT kits would enable them to be modified to serve a useful purpose in the Caribbean.

Practical Work

Because participants realized that the greatest need for equipment was at the primary and junior (lower) secondary schools, they decided to design equipment for teaching at those levels using SEPU and NCERT ideas for the purpose. One group focused attention on lower primary school work; three dealt with upper primary school work; and three more initiated projects for the junior (lower) secondary school level. All groups had access to the pupils' and teachers' manuals of the West Indian Science Curriculum.

The lower primary school group produced a kit designed to illustrate sound and the effects of sound. The main component of the apparatus was a multi-purpose wooden box suited to machine production.

For the upper primary level, one of the three groups produced a kit that could be used to teach the topic "pressure". Using easily obtainable materials, the group made items which could be used in a number of different activities to explain the concept of pressure. A second group developed a project on solar energy, and a third constructed simple items of equipment that could be used to teach the topic "friction".

One of the groups interested in junior (lower) secondary school work constructed a simple viewer, and used it to observe plant and animal cells. This group also produced teachers' guide, pupils' worksheet, and instructions on care and handling of the viewer. The two remaining groups worked with circuit boards; one made the base out of pegboard, and the other out of strips of wood.

For each of the projects mentioned above, participants were encouraged to write down the difficulties they encountered in producing the equipment and to note what efforts they made to overcome the difficulties. Projects started but found not feasible were also noted, and reasons given as to why they could not be carried out. Efforts were also made to develop manuals which would serve as guides to teachers as well as students.