Science comes alive

Testing 'huskability' at a CSIRO science education centre. Students can conduct experiments using equipment not generally available in schools.

How do young people learn about research by CSIRO and other scientists that probes our environment, our economy and our health? For more than 60 000 students a year, it's by visiting one of the CSIRO Science Education Centres (CSIROSECs) located in every capital city. The most recent centres to open their doors have been in Canberra and Townsville.

Each centre is unique (rather than being total clones like McDonald's stores) and reflects the research carried out in that region and in the host CSIRO division. The Green Machine in Canberra, for example, is a joint project of CSIRO Education Programs, the Plant Science Centre (a Co-operative Research Centre made up from CSIRO Division of Plant Industry and the Australian National University) and the ACT Department of Education and Training. As the name suggests, the Green Machine concentrates on Plant Science.

Students enjoy hands-on experiments using equipment generally not available in schools and which reflect the outcomes of scientific research. In Canberra, experiments include dehusking various strains of wheat, some which are no longer being grown commercially. The students learn the basics of experimentation and how selective breeding and, more recently, genetic engineering have led to larger wheats that are easier to dehusk and have many other desirable qualities. Some groups even try out biotechnolgy techniques that are not available at schools.

In Townsville, the partners in the North Queensland Science Education Centre are CSIRO Education Programs, the Queensland Department of Education Northern Region and James Cook University of North Queensland. One group of experiments there allows students to undertake the processes involved in extracting and refining copper to its almost pure state. They follow the same steps as the local Copper Refineries Limited which funded these activities.

But CSIROSECs don't only sit still. With the help of the Science and Technology Awareness Program of the Department of Industry, Science and Technology, they travel the country. They've been to Newman in Western Australia; to islands off the Northern Territory; to central Queensland; to western New South Wales and as far south as there are people in Tasmania. The response from these regional areas is strong, with demand much greater than can be met.

The national network of CSIROSECs allows the centres to share and exchange resources as well as learn from each others experiences.

CSIROSECs offer students an enjoyable and educational experience, stimulating an enthusiasm for science. But the network's role does not stop there. CSIROSECs are the base for the full range of projects offered by CSIRO Education Programs. These include teacher professional development sessions which have an extended influence by reaching many students through the teachers. The sessions offered are usually programs developed by the centres which relate to the work of CSIRO.

Other projects based at centres include CSIRO's Double Helix Science Club with its 24 000 members across Australia and the CSIRO Student Research Scheme which this year offers the unique experience of scientific research under the supervision of a practising scientist to more than 550 senior secondary students. A new project, CREST, will also operate from centres. CREST supports teachers in offering students their own scientific research project as part of the curriculum.

The CSIROSECs are all joint ventures with local education departments and often other groups. In Perth and Adelaide, they are located within public science centres and the projects of each are linked.

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