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CSIRO Education Tasmania



Annual Report 1999

prepared by

Darrel G Harington
Manager

CSIRO Science Education Centre Tasmania
A joint project of CSIRO and the Education Department Tasmania

HIGHLIGHTS for 1999

- Total number of people involved in CSIRO Education activities exceeds 18,000 – up 2,000 on previous year.
- Four and a half weeks of hands-on activities conducted in other regions of the state on a self-funding basis.
- First visit by CSIROSEC to the west coast of Tasmania.
- CSIRO Student Research Scheme caters for 14 students statewide.
- Media coverage of CSIRO Education on television, radio and in the print media
- Development of Puzzlemania 2000 program to travel out to schools.
- Development of The Little Learner's Lab program of hands-on activities for grade 1 and 2 children.
- CSIROSEC conducts Food Technology program for grade 9 to 12 students.
- Expansion of CSIROSEC Vacation Program: number of participants doubles.
- Double Helix Drama performs to a total audience in excess of 2,000, including performances interstate.
- Double Helix Drama wins Queensland Science Drama Awards.
- CSIROSEC conducts Model Solar Car Challenge.
- CSIROSEC continues to hold its own against competition from Antarctic Adventure and free centres such as the Hydro Hands-On Centre and Mining and Minerals Centre.

Staff

Darrel Harington	Manager
Richard Verrall	Education Officer
Michaela Wegman	Double Helix/CREST Officer
Denise Schilling	Office Support

Statistics

See statistics in Appendix 1

New Programs

A number of new programs have been run, developed and commenced during 1999. These include –

Puzzlemania 2000	90 minute programs to travel out to schools in 2000. Programs for grade 5/6 and secondary students. This is a follow-up program to the successful Puzzlemania conducted in 1999.
Gene Technology	This is not a new program, but 1999 is the first year that CSIROSEC has run this program without external assistance.

The Little Learner's Lab	A program of hands-on science activities developed for grade 1 and 2 children. This program was developed in-house with ideas borrowed from centres around the world and a number of original ideas. The program is supported by a professional development session for teachers, pre-visit and post-visit activities and links to the national profiles.
Forensic Science	A new forensic science scenario developed especially for upper primary and lower secondary students.
Food Technology	A travelling program developed in Sydney. This program was run successfully with grade 9-12 students, mostly from Food Studies and Hospitality.
Vacation Activities	A number of new vacation activities have been developed or borrowed from other Centres.

CREST

Supported by the Education Department Tasmania

CREST activities have focussed on teacher support and promotion of the program, both at CSIROSEC and during travelling sessions. Formal teacher seminars were given to 40 teachers. Thirty information packs were sent out to schools and home-school families as a result of phone enquiries. The CREST Officer met with students and teachers to discuss progress with bronze level awards. A CREST camp was conducted during the June vacation. Groups of students completed four day programs, including a bronze level CREST award, during the January and September vacations.

No. of registered Primary groups	33(25)
No. of registered Secondary groups	27(22)
Number of Primary Green CREST Awards	131(382)
Number of Primary Orange Awards	30(68)
Number of Primary Blue Awards	5(12)
Total Primary CREST Awards	166(462)
Number of Secondary Bronze Awards	76(109)
Number of Secondary Silver Awards	7(4)
Number of Secondary Gold Awards	0(0)
Total Secondary CREST Awards	83(113)
Total CREST Awards completed	249(575)

1998 figures shown in brackets

CSIRO Student Research Scheme

Total projects completed	13
CSIRO projects completed	6

Engineering projects completed	2
Number of students completing projects	14
Number of female students	7 (50%)
Number of scientists involved	9
Number of institutions	7

The numbers of students and scientists were down this year. This is largely a reflection of the need to concentrate efforts upon revenue generating activities. Consequently, this program did not receive a sufficiently large proportion of the staff time available. With new programs now in place it is envisaged that SRS will receive greater attention in 2000.

A presentation skills workshop was conducted for the participating students during the September vacation in order to prepare them for the presentation evening.

Students were presented with their certificates at an evening attended by 40 people, including students, scientists, teachers, parents, friends and sponsors. Students gave oral presentations of their work and posters of the students' work were displayed.

In 1999 the CSIRO Student Research Scheme was funded by CSIRO Education.

CSIRO's Double Helix Science Club

Sponsored by BHP

After school and vacation activities continue to be the main thrust of our Double Helix program. The after school program includes MicroScientists, Curie-ous Kids and Chemistry Cadets. Curie-ous Kids runs once a week during term and the others once a month. These sessions provide a service to our members as well as a small but steady income.

The DH Officer also prepares and presents activities for our vacation programs. The statistics for the vacation programs appears under the Other Programs in Centre. A Double Helix camp was again conducted at the Orford Youth and Convention Centre during the June vacation. Numbers were up again this year. The camp was based around the theme of science research, with members being offered the opportunity to complete a CREST Award.

No. of events	62(92)
No. attending	689(1202)

Numbers for 1998 are shown in brackets.

The statistics above do not show the involvement of the Double Helix Drama Group, this is included in a separate section.

Chapters: Both Double Helix Chapters (Launceston & Devonport) have folded. Unfortunately the running of Chapters relies on the goodwill of volunteers who decide from time to time to move on. This has occurred with both chapters. At the present time there are no local coordinators for either Chapter. Negotiations are underway to re-establish Double Helix activities for members in these areas.

Family Science evenings were conducted at CSIROSEC based around the Cool Chemistry program.

Double Helix Drama Group

Summary of Activities

- Participation in Australian Science Festival, ACT. Performed "Proteins Made Here". 14 students from 4 different states involved. 4 performances, 600 in audience.
- Annual production "Y2K: A Date with the Clockroach". 25 students involved, 250 audience, 3 performances.
- Camp at Gumleaves for script-writing and rehearsal.
- Science drama awards – encouragement award at the Victorian Drama Awards (14 students involved), first prize at the Queensland Science Drama Awards (7 students involved).
- National Drama in Education Conference, Darwin, attended by J. LeRoi. Presented science drama workshop and Double Helix display. Total participants 150.
- DHD article in Weekend Australian (August)
- DHD received Hobart City Council Volunteers Award for contribution by young people to science education
- Invited to perform at the 9th International Harmful Algal Blooms Conference at Wrest Point. Performed "The Deadly Dinoflagellate". 30 students involved, audience of 500.

A special vote of thanks is due to Jeannie-Marie LeRoi, her committee of senior Double Helix members (including Andrew Greenhill, Andrew Gillies and John Rowland) and a group of dedicated parents for their untiring work with the Double Helix Drama Group during 1999.

Vacation Programs

These are becoming a much more important part of CSIRO Education in Tasmania. In 1998 1380 children attended mostly full-day vacation sessions, this number has almost doubled in 1999 to 2642.

Vacation program activities have included Balloon Science, Spaced Out, Moon Rescue, Rockets and Things that Fly, Chemists for the Day 1&2, Forensic Science Certificate Course, Experiments, Projects & Research Program, Sound, Who Dunnit?, Puzzlemania, Computer Games Days, Bangs, Pops & Fizzes, Slime, Deconstruction Derby, Build a Model Solar Car, Build a Model Solar Boat, Marine Scientists for the Day (in conjunction with the Marine Discovery Centre), Christmas Crackers, Eureka Too, The Little Learner's Lab, Worms, Composting & Recycling, Nature Walks, Chemists at Uni, Chemistry at Pasmenco EZ etc.

Vacation programs have become a major priority from a financial point of view. These programs generate substantially greater income than can be achieved from visiting school groups during the same period of time. Our vacation program is presently helping to maintain our financial viability.

Gene Technology

In 1998 the Gene Technology program was conducted by post-graduate students from the University of Tasmania. This did not prove to be entirely satisfactory for a number of reasons. The 1999 program was conducted by the Centre's Manager with an increased approval rating from the participating schools and colleges. The learning curve for running new programs of this type is very steep. Support provided by The Green Machine in Canberra was greatly appreciated.

Food Technology

The Food Technology program was developed at the Sydney CSIROSEC to travel to other CSIROSECs around Australia. There were a number of teething problems with the program and its equipment. Most, but not all, of these were able to be overcome. The program received good feedback from the schools and colleges attending. The majority of the groups were from new markets (Food Studies and Hospitality). The program will run in 2000 in a modified form.

Australian International Model Solar Car Challenge

Supported by Institution of Engineers Australia and Pure Foods

The Model Solar Car Challenge was conducted at the Woodbridge District High School on October 16th. There were both primary and secondary sections.

A workshop, barbeque and video were run on the Friday evening by the Woodbridge District High School teams for all participants and parents.

The standard of vehicles continues to improve with the racing again very close.

Five teams of students, with accompanying teachers and parents, were selected to participate in the Australian finals in Adelaide. Accommodation and travel fares were partially subsidised by the Institution of Engineers Australia, Tasmanian Branch, and Pure Foods. Pure Foods, Tasmania also provided caps and T-shirts for team uniforms.

A special thanks is due to Graham Armstrong from Woodbridge District High School for his continuing commitment to and support of the Model Solar Car Challenge.

Teacher Professional Development

Sessions have been conducted at CSIROSEC and in schools relating specifically to CSIRO Education; Eureka Too, Moon Rescue, Balloon Science, The Little Learner's

Lab, Puzzlemania and CREST and a general session for the trainee Bachelor of Education Students.

Travelling Sessions

Four and a half weeks were conducted to other areas of the state.

- Mount Arthur – Forensic Science
- Launceston – Puzzlemania and Balloon Science
- Devonport – Grade 7 Hands-On Program and Eureka
- West Coast – Puzzlemania
- Launceston – National Science Week – Puzzlemania and Balloon Science
- St Helens – Puzzlemania and Balloon Science

Puzzlemania travelled out to local schools for 15 days.

Balloon Science travelled out to local schools for 4 days.

These two programs generally run 3 sessions per day when travelling to schools.

Visits were also used to promote CREST and conduct Double Helix events.

The CSIROSEC Building

A new bench has been built in the roofed area between the labs and the office.

Finances

CSIROSEC continues to generate an increasing amount of its own revenue. Despite various difficulties foreshadowed in the 1998 annual report the Centre was able to eliminate its carried forward debt from the previous financial year and come in on budget. The broadening of our base of revenue generating activities and diversification of offerings to schools are essential contributors to our continuing financial viability. Activities such as our growing vacation program and regular after-school Double Helix sessions have contributed to our increased income.

The tightness of the budget and concerns over continuing employment and security of staff are on-going problems.

Conclusion

This has been a challenging year but one of significant progress. Both the range and quality of programs offered by CSIROSEC continue to improve each year. This is a result of both the development of in-house programs for the local market and the development of programs by CSIRO Education which travel Australia (Gene Technology and Food Technology).

The prognosis for 2000 is promising, but nonetheless challenging.

Acknowledgements

In addition to sponsors already mentioned in relation to specific programs, CSIRO Education in Tasmania wishes to acknowledge the support given by various organisations during 1998. These include CSIRO Division of Marine Research and Education Department Tasmania.

It is important to recognise the commitment of the CSIROSEC staff. Any organisation is only as good as the people who do the job. CSIROSEC in Tasmania is very fortunate to have a hard-working staff who put in many extra hours to maintain the viability of the Centre as a quality educational offering for Tasmanian students.

CSIRO Science Education Centre Tasmania Annual Report

Appendix 1 Statistical Summary

Practical Classes & Shows						
Program (in Centre)	1999			1998		
	Sessions	Students	Adults	Sessions	Students	Adults
Little Learners' Lab	51	1214	305			
Primary hands-on	90	2263	301	127	3122	328
Eureka	49	1233	196	46	1084	237
Secondary hands-on	20	386	37	20	437	43
Forensic Science	4	70	5	9	181	11
Moon Rescue (Secondary)	7	152	13	9	253	26
Moon Rescue (Primary)	14	353	37	24	421	42
Food Technology	14	292	25			
Gene Technology	20	434	24	11	214	22
Sub-total (in Centre)	269	6397	943	299	7546	1069
Program (out of Centre)	1999			1998		
	Sessions	Students	Adults	Sessions	Students	Adults
Travelling sessions (Statewide)	68	1900	103	55	1375	165
Travelling sessions (Local)	61	1346	109			
Sub-total (out of Centre)	129	3246	212	55	1375	165
Total (in and out of Centre)	398	9643	1155	354	8921	1234
Percentage of government schools	67.60%			63%		
Percentage of Catholic schools	22.12%			21.50%		
Percentage of other schools	10.28%			15.50%		
Percentage of metropolitan schools*	82.91%			68%		
Percentage of non-metropolitan schools	17.09%			32%		
Percentage of primary students	82.95%			79%		
Percentage of secondary students	17.05%			21%		
Double Helix Science Club						
Chapter	1999			1998		
	No. of Events	Students	Adults	No. of Events	Students	Adults
South	62	689	160	73	732	183
North				15	180	45
North-West				4	50	12
Sub-totals	62	689	160	92	962	240
Number of Chapters during year	0			3		
Number of Members (at Dec)		672			711	

Student Research Scheme		1999		1998	
Number of students who completed projects		14		24	
Number of female students		7		12	
Total number of projects completed		13		22	
Number (%) of engineering projects		2		6	27%
Number (%) of CSIRO projects		6		1	4.50%
Number of institutions (count each CSIRO Division and Uni campus separately)		7		15	
Number of supervising scientists		9		15	
Number of people attending functions		40		52	
Total number of people involved		77		135	
CREST		1999		1998	
Number of Primary CREST Centres		33		25	
Number of Green Awards		131		382	
Number of Orange Awards		30		68	
Number of Blue Awards		5		12	
Sub-total Primary Awards		166		462	
Number of secondary CREST Centres		27		22	
Number of Bronze Awards		76		108	
Number of Silver Awards		7		4	
Number of Gold Awards		0		0	
Sub-total Secondary Awards		83		112	
Total number of CREST Awards		249		574	
BHP Science Awards		1999		1998	
Number of teacher entries		0		3	
Number of student entries		26		41	
Total number of BHP science awards		26		44	
Teacher Professional Development		1999		1998	
Program		No. of		No. of	
		Sessions	Teachers	Sessions	Teachers
CSIROSEC seminars		14	149	6	100
CREST seminars		7	40	7	36
Sub-total		21	189	13	136
Other Programs and Visitors		1999		1998	
Double Helix Drama Group performances		2100		3310	
Model Solar Car Challenge (Ss/Adults)		75	60	70	58
Double Helix Camp (Ss/Adults)		22	2	13	3
Evening sessions (Scouts, Rural Youth etc)	4	85	15	89	14
Vaction Activities		2642	112	1380	75
Double Helix After- School Activities		689	65		
Sub-total		5613	254	4856	150
Total participants in all Programs		18055		16066	

CSIRO Education Tasmania



Annual Report

2000

prepared by
Stephen Knowles
Manager

CSIRO Science Education Centre
A joint project of the CSIRO and the Education Department
Tasmania

Highlights for 2000

Total number of people involved in CSIRO Education Activities exceeds 1999 figures.

Six weeks of hands on activities conducted in other regions of the state on a self funded basis.

- CSIROSEC visits West Coast for second year.
- CSIRO Student Research Scheme caters for 17 students.
- Puzzlemania 2000 successful and Puzzlemania 2001 on the way.
- Development of Little Learner's Lab Too for Grade 1& 2 students.
- CSIROSEC conducts Food Technology.
- CSIROSEC conducts OZ Science.
- CSIROSEC conducts Gene Technology.
- Further expansion of CSIROSEC holiday program by offering new activities.
- Double Helix Drama celebrates ten years of science drama performances.
- CSIROSEC conducts Solar Car Challenge.
- CSIROSEC again continues to hold its own against increasing competition in the field.

Staff

Darrel Harington	Manager	Jan - July
Stephen Knowles	Manager	July - Dec
Richard Verrall	Education Officer	
Michaela Wegman	Double Helix /CREST Officer	Jan - Oct
Denise Schilling	Administrative Assistant	
Andrew Gillies	Double Helix Support	July - Dec
Marcus Pollard	CREST Support	Dec

Statistics

See statistics in Appendix 1

New Programs

A number of new programs have been developed and commenced during 2000.

Puzzlemania 2001

A 90-minute program based around Puzzles 1999 for students in upper primary and secondary classes. This will continue from the very successful Puzzlemania 2000 which met with wide spread approval throughout the state.

Oz Science

New national program run in the centre this year that will again be offered to schools in 2001.

Little Learner's Lab Too

A new program based on Little Learners Lab designed to cater for students in Grade 1 & 2.

Beauty and the Beast

A new holiday program to promote science to girls, involving making every day cosmetic items.

Illusions

Developed over the last two years and now ready to travel out to schools and major centres.

Forensic Science

A program developed over the last few years has now been extended to cover a wider target audience. Further development will take place based on a different scenario using similar equipment in the future.

CREST

Supported by the Education Department Tasmania

CREST has again been well represented in Tasmania. The number of schools involved and the number of awards achieved have increased slightly.

The level of support schools received from Vicki Stavropoulos in Canberra has been much valued and all schools involved are very impressed.

As our CREST officer left during the year the organisation of CREST had become a little disjointed. We look forward to offering a better service next year especially to our Primary Schools.

No of Registered primary Groups	34 (33)
No of Registered Secondary Groups	23 (27)
<u>Primary CREST</u>	
Number of primary Green Awards	74 (131)
Number of primary Green Awards	52 (30)
Number of primary Green Awards	50 (5)
Total primary CREST Awards =	176 (166)
<u>Secondary CREST</u>	
Number of Secondary Bronze Awards	83 (76)
Number of Secondary Silver Awards	11 (7)
Number of Secondary Gold Awards	0 (0)
Total secondary Crest Awards =	94 (83)
Total CREST Awards	270(249)

(Indicates 1999 figures)

CSIRO Student Research Scheme

The Student Research Scheme was again well supported by students and scientists in the State.

A skills workshop was held prior to the presentation and this led to high quality talks on the day involving the use of over head projectors and Microsoft Power Point displays on data projectors.

Students were provided with their certificates at a lunchtime event during the September holidays in Hobart and at a night presentation at Launceston College in front of a large and distinguished audience.

The University of Tasmania has funded Dr. David Russell to place students during the holidays with scientists. If the student undertakes 20 hours unpaid work, makes a poster and give an oral presentation their participation will gain recognition under the CSIRO Student Research Scheme in 2001.

In 2000 the CSIRO Student Research Scheme was sponsored by CSIRO Education.

Completed	17
Females	8
Engineering Projects	1
CSIRO Projects	6
Institutions	8
Supervising Scientists	14

CSIRO's Double Helix Science Club

After school and vacation activities continue to be the main thrust of the Double Helix Science Club Program. The after school activities offered this year included Micro-scientists, Kids in Labs and Curie-ous Kids. Curie-ous Kids runs once a week and the others once a month. These sessions provide both a service to our members and a steady income.

Double Helix statistics are included in Appendix 1.

Double Helix Drama

Double Helix Drama celebrated quite a milestone this year with ten years of operation.

During 2000, 120 students were involved in Double Helix Drama productions at a local, national and international level. The total audience for the year was over 2300 people and students gave over 30 performances. Highlights included performing at an international conference, concurrent presentations in Hobart and Canberra during National Science Week, travelling to New Zealand to perform at the International Science Festival, and celebrating ten years of Double Helix Drama!

Double Helix Drama is coordinated on a voluntary basis by Jeannie-Marie LeRoi, Andrew Gillies, Andrew Greenhill and John Rowland. We would like to thank parents who helped with DHD activities and all the students who were involved this year.

Further details of Double Helix Drama activities are given in Appendix 2.

Vacation Program

This is now an integral part of the operation of the Centre both for members to have events to attend and a necessary part of our earnings during school holidays. This program fills the gap when schools are not operating and allows us to continue to collect funds.

Vacation program activities include: Construction and Deconstruction Derby days, Sounds like Fun, Xmas Crackers, Forensic Science, Balloons, Electronics, Mountain Walk, Rockets, Games Days, Experiments, Solar Cars, Ballistics & Projectiles, Moon Rescue and Spaced Out.

We ran programs during the January, Easter, May and December School holidays.

Gene Technology

Gene Technology again travelled to the Centre and was well received although numbers were down as most schools now conduct their own DNA extraction using onions. The Centre is still keen to continue with this program and highlighting the technique of electrophoresis for separating DNA segments. Eight schools with 121 students undertook the Gene Technology Course this year.

Food Technology

Food technology ran successfully, overcoming the teething problems experienced previously. The program received good feedback and next year will be marketed more to schools as a Home Economics and food cleanliness experience, highlighting the consequences of unsafe food practices. Five classes undertook Food Technology during 2000.

Oz Science

Oz Science, a new national program, was set up at the Centre and ran with several groups as a trial. It seems to be suited for a 90-minute show with a distinctly Australian theme. We were pleased with the program and will be offering it again in 2001.

Computer System

The Centre now has a Windows NT based system allowing for central storage and backing up of information. This added security is an asset. The AppleTalk network has 10 machines linked to a central server in the secondary room allowing access to shared resources and a laser printer. Several stand alone Macs are used for the primary program. Our web site should be established early next year after some month's development.

Australian International Model Solar Car Challenge

The Tasmanian Model Solar Car Challenge was again coordinated by CSIRO Education. This year's event was sponsored by Institution of Engineers Australia (Tasmania), The Hydro Hands on Energy Discovery Centre and Pure Foods.

The main event was conducted at Woodbridge District High School on Saturday October 28 in dismal conditions with the Clarence Team of Kent Jeffery and Scott Petraitis (managed by John Jeffery) winning.

The standard of the thirteen cars was excellent with any five of the top nine cars able to represent the state in Sydney.

Five teams were chosen to represent the state in Sydney on November 25-26 at the National Challenge with three cars making the finals and two making the last eight. It was an outstanding effort.

Teacher Professional Development

Sessions have been conducted at the CSIROSEC and in schools for Eureka, Eureka Too, Little Learner's Lab, Moon Rescue and Balloon Science. A general session was held with the trainee Bachelor of Education students from the University of Tasmania.

Travelling Sessions

The Centre has travelled extensively this year, with sessions run in following areas for a week or more:

• Launceston	Little Learners' Lab	March 13-17
• Burnie	Puzzles	July 24-28
• Ulverstone	Little Learners' Lab & Eureka Too	Oct 30 – Nov 3
• Launceston	Puzzles	Oct 16-23
• Devonport	Grade 7 'Hands On' & Puzzles	Nov 27-30
• West Coast	Puzzles	Sept 11-15

Puzzles runs three sessions per day, Little Learners' Lab & Eureka Too four sessions per day and Grade 7 'Hands On' two sessions per day.

The success of the travelling program is measured by the enthusiasm of the schools. Next year more locations have been included in the travelling program.

Visits promote CREST, Double Helix events, CSIRO operations and the role of scientists in society.

The CSIROSEC Building and Surrounds

Internal work has been completed and the work on finding storage for all equipment has been on-going. The grounds have been made more presentable and an effort is being made to maintain them by our cleaner.

Finances

CSIROSEC continues to generate an increasing amount of its own revenue. The 1999-2000 budget carried forward a small surplus. The broadening of the revenue base to include a holiday program has resulted in extra funds being available to offset the school holidays when schools do not visit the centre. The management of expenses has resulted in considerable savings.

Finances are an area requiring careful attention at all times and provided the budget is targeted, maintained and controlled then on-going success seems assured.

Conclusion

This year saw a change of managers with Darrel Harington leaving the CSIROSEC after many years. Darrel's contribution has resulted in a rich variety of quality programs that will be built on for years to come.

The range and quality of the programs offered by the Centre continue to expand. This is due to both in house development and from the national travelling programs.

2001 will no do doubt be a very challenging year.

Acknowledgements

In addition to the sponsors already mentioned in relation to specific programs, CSIRO Education in Tasmania wishes to acknowledge the support given by various organisations during 2000. These include the CSIRO Division of Marine Research and Education Department Tasmania.

Appendix 1

CSIRO Science Education Centre Annual Report Statistical Summary

Programs for Schools						
Program (in Centre)	2000			1999		
	Sessions	Students	Adults	Sessions	Students	Adults
LLL	52	1256	276	51	1214	305
Primary	67	1630	215	90	2263	301
Eureka	58	1424	239	49	1233	196
Secondary	12	270	17	20	386	37
Forensic Science	12	231	20	4	70	5
Food Technology	5	98	12	14	292	25
Gene Technology	7	121	9	20	434	24
Balloon Science	14	342	37	-	-	-
Cool Chemistry	28	660	66	-	-	-
Moon Rescue	20	485	43	21	485	50
Sub-total (in Centre)	275	6517	934	269	6377	943
Program (out of Centre)	2000			1999		
	Sessions	Students	Adults	Sessions	Students	Adults
Eureka 2	24	601	61	-	-	-
Grade 7	6	149	6	-	-	-
Illusions	10	410	30	-	-	-
LLL	21	499	85	-	-	-
Puzzlemania	54	1238	65	-	-	-
Eureka	16	399	32	-	-	-
Other (Metro schools)	10	259	21	-	-	-
Travelling Sessions (Local)				61	1346	109
Travelling Sessions (Statewide)				68	1900	103
Sub-total (out of Centre)	141	3555	300	129	3246	212
Total (in and out of Centre)	416	10072	1234	398	9623	1155
Percentage of government schools		73			68	
Percentage of Catholic schools		17			22	
Percentage of other schools		10			10	
Percentage of metropolitan schools*		97			83	
Percentage of non-metropolitan schools		3			17	
Percentage of primary students		84			83	
Percentage of secondary students		16			17	

*Metropolitan schools are those located in the same city as the CSIROSEC

**Education Programs headquarters will complete this section

Chapter	2000			1999		
	No. of Events	Students	Adults	No. of Events	Students	Adults
Double Helix Science Club (Curie-ous Kids)	38	400	15	62	689	160
Double Helix Drama (workshops)	2	30	6	2	22	2
Micro Scientists	10	90	-			
Kids in Labs	6	22	-			
Computer Games	5	16	-			
Sub-totals	61	558	21	64	711	162
Number of Chapters during year		1				
Number of Members (at Dec)		551				

Student Research Scheme	2000		1999	
Number of students who completed projects		17		13
Number of female students who completed projects		8		7
Total number of projects completed		17		13
Number of engineering projects		1		2
Number of CSIRO projects		6		6
Number of institutions (count each CSIRO Division and Uni campus separately)		8		7
Number of supervising scientists		14		9
Number of people attending functions		50		40
Total number of people involved		81		62

CREST**	2000		1999	
Number of Primary CREST Centres		34		33
Number of Green Awards		74		131
Number of Orange Awards		52		30
Number of Blue Awards		50		5
Sub-total Primary Awards		176		166
Number of secondary CREST Centres		23		27
Number of Bronze Awards		83		76
Number of Silver Awards		11		7
Number of Gold Awards		0		0
Sub-total Secondary Awards		94		83
Total number of CREST Awards		270		249

*Metropolitan schools are those located in the same city as the CSIROSEC

**Education Programs headquarters will complete this section

BHP Science Awards**		2000		1999			
Number of teacher entries		3		0			
Number of student entries		3		26			
Teacher Professional Development							
		2000		1999			
Program (in Centre)		Sessions	Teachers	Sessions	Teachers		
University of Tasmania		1	16	-	-		
Eureka/LLL		1	15	-	-		
CSIROSEC Seminars				14	149		
CREST Seminars				7	40		
Sub-total (in Centre)		2	31	21	189		
		2000		1999			
Program (out of Centre)		Sessions	Teachers	Sessions	Teachers		
Sub-total (out of Centre)		0	0	0	0		
Total (in and out of Centre)		2	31	21	189		
Other Programs and Visitors							
		2000			1999		
Program (in Centre)		Sessions	Students	Adults	Sessions	Students	Adults
Model Solar Car Challenge		4	60	3	4	75	60
Evening Sessions		2	40	8	4	85	15
Vacation Activities		84	1307	22	62	689	160
Double Helix After School Activities		59	528	21	40	500	0
Sub-total (in Centre)		149	1935	54	110	1349	235
		2000			1999		
Program (out of Centre)		Sessions	Students	Adults	Sessions	Students	Adults
Double Helix Drama Group Performances		Not Included this year				2100	
Sub-total (out of Centre)		0	0	0	0	2100	0
Total (in and out of Centre)		149	1935	54	110	3449	235
		2000		1999			
Total participants in all Programs		14222		18055			

*Metropolitan schools are those located in the same city as the CSIROSEC
 **Education Programs headquarters will complete this section

Appendix 2

February 2000

"The Deadly Dinoflagellate"

An invited presentation at the Ninth International Harmful Algal Blooms Conference, Wrest Point Convention Centre, Hobart - and the highlight of the conference!

Topic: Introduced toxic algal species
Co-ordinator: Andrew Greenhill
Number of students involved: 33
Audience : 500 international scientists
Sponsorship: \$1300 from the Conference organising committee

May 2000

"Nerve On, Nerve Off"

Presentation at the Australian Science Festival, Canberra

Topic: Nerve cell function and depression
Co-ordinator: Jeannie-Marie LeRoi
Number of students involved: 20
Audience: 600 secondary school students
Sponsorship: \$2000 from Mental Illness Education, ACT

"A Plane Mystery"

An interactive science theatre experience held in Hobart during National Science Week

Topic: Investigating a plane crash
Co-ordinators: Andrew Gillies and John Rowland
Number of students involved: 6
Audience: 300 primary and secondary school students

July 2000

"Strife in the Stratosphere"; and "The Trial of OncoMouse"

Invited performances at the International Science Festival, New Zealand (Dunedin and Hamilton)

Topics: Ozone depletion; and genetic engineering of animals for medical research
Co-ordinators: Andrew Greenhill and Jeannie-Marie LeRoi
Number of students involved: 20
Audience: 700 people, all ages!
Sponsorship: Numerous sources, including:
- International Science Festival
- Hamilton Science Festival
- Australian High Commission in Wellington
- Department of Education, Tasmania
- Glenorchy City Council

November 2000

"ResOILution"

Invited performance at the Bass Strait Forum, Launceston

Topic: Oil spills and marine pollution
Co-ordinators: Andrew Gillies and Jeannie-Marie LeRoi
Number of students involved: 31
Audience: 100 forum participants
Sponsorship: \$200 from the Australian Association for Environmental Education

Ten Year Anniversary Celebration

Celebrating ten years of Double Helix Drama. Held at the Studio Theatre, University of Tasmania, Hobart, and including performances of "ResOILution" and "Who Wants to be A Millionaire" as well as the official launch of the new DHD book, "Acting Out Science."

Co-ordinators: Andrew Gillies, Andrew Greenhill, Jeannie-Marie LeRoi and John Rowland
Number of students involved: 30
Audience: 150 family members, friends and past DHD members

Other Double Helix Drama Activities ...

In May (during National Science Week), SCI-ACTION 2000, a science drama camp, was hosted by Double Helix Drama in Canberra. This event included science drama workshops, performances at the Australian Science Festival, attending Festival events, as well as sightseeing around Canberra, and was co-ordinated by Jeannie-Marie LeRoi, Caroline Lapworth and Ruth Oettle. Fourteen students from Tasmania, South Australia and the ACT were involved.

In April, Jeannie-Marie LeRoi attended the Tasmanian Science Teachers Annual Conference in Hobart, and in September she travelled to Singapore to represent Australia at the Second APEC Youth Science Festival. At both events, Jeannie-Marie was able to promote Double Helix and Double Helix Drama. On the basis of her volunteer work with Double Helix Drama, as well as other community activities, Jeannie-Marie was also selected to be a torch bearer in the Olympic Torch Relay.

During the September holidays, Andrew Gillies and Jeannie-Marie LeRoi, with assistance from Katy Jones and Vincent Bound, organised a science drama workshop as part of the CSIRO Education Centre's Holiday Program. The workshop was attended by about 15 students and was enjoyed by all!

In December, Katy Jones, Andrew Greenhill and Jeannie-Marie LeRoi presented a session on science theatre at the Science Quality Teachers Program workshop in Bicheno, Tasmania, in response to an invitation from the workshop convenors. This session was highly successful, with much interest and enthusiasm shown by the teachers.