

AR
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2010



**Bush
Rangers**
Western Australia



ANNUAL REPORT 2010

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Department of
Environment and Conservation



Cover photos: (left) Northam cadets working with a DEC ranger; (top right) Carmel cadet sets camp; (bottom right) Thornlie cadets try some team building activities on camp.

Back cover photos: (left) Atwell College at the Pinnacles Desert; (right) Kununurra cadets canoe as bats fly overhead.

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Program Coordinator message

Program Coordinator message

The Bush Rangers WA program has grown from strength to strength in its 12th year of operation, with no units closing and several new units joining throughout the year. The year has flown by for me; I enjoyed meeting instructors and unit leaders at the annual conference, and have been busy visiting units since then.

I have been inspired by the broad range of activities that units have selected to be a part of. I have also been very impressed by the willing participation of cadets in tough and challenging activities offered as part of the rewards program.

The revised Bush Rangers WA webpages are now operational at www.dec.wa.gov.au/bushrangers. Here you can find information on the program in general, as well as about individual units. Information on individual units' projects is a work in progress; please send in the details if you have a project you wish to highlight.

I would like to thank the school communities, unit leaders, instructors, cadets, Department of Environment and Conservation staff and other partners for all of their efforts towards conservation, highlighted in this report. I look forward to meeting you and working with you in the coming year.

Hannah Hampson



ABOVE Emmanuel Catholic College Bush Rangers with Hannah Hampson (top middle) at the Perth Hills Centre.



ABOVE Esperance Senior High School cadets at Forth Beach.

Bush Rangers WA and Cadets WA

Bush Rangers WA is part of the Department of Environment and Conservation's (DEC's) EcoEducation program for primary and secondary schools. It is primarily the responsibility of DEC's Strategic Development and Corporate Affairs Division, with input from other areas.

Bush Rangers WA is a voluntary nature conservation program for young Western Australians. It is part of a broader Cadets WA program, run by the Department for Communities, which aims to give secondary school-aged youth the opportunity to take part in personal development training. The training provides practical life skills, develops leadership, teamwork and initiative, and fosters qualities of community responsibility and service.

Since its inception in 1998, 10,000 WA youth have taken part in the Bush Rangers WA program, experiencing first-hand biodiversity protection and conservation in the natural environment.

To date, Bush Rangers have collectively contributed more than 2.5 million hours to conservation and community projects.

The unit has helped plant over 5,000 trees to help protect the Lake Warden catchment, as well as being part of a project to realign walk tracks at Fourth Beach to help protect the hooded plover, among many other activities.

Esperance Senior High School Bush Rangers

"Our cadets, many of whom are from lower socio-economic backgrounds, are able to have a number of enriching experiences that they are unlikely to have the opportunity to be a part of without the program. Our cadets were able to learn a number of new skills and overcome some significant challenges. Watching the cadets develop, particularly in the areas of teamwork and leadership skills, is always an encouraging experience for me as a leader. The Bush Ranger cadet group again proved an excellent program for our school."

Waroona District High School unit leader

Bush Rangers WA vision, mission and objectives

Vision statement

The Bush Rangers WA program is the state's pre-eminent youth-based nature conservation and community development program.

Mission statement

To support young Western Australians to take an active and lead role in the conservation of the natural environment and to understand the mechanisms for its management.

Objectives

- To provide in youth, through appropriate training and supervision, the basis for an active and lifelong commitment to the conservation of the natural environment.
- To foster a conservation ethic in young Western Australians through their participation in practical conservation and environmental management projects.
- To develop leadership and teamwork skills, and the qualities of self discipline and duty, loyalty and service to the community, school and to the Bush Rangers WA program.
- To provide young Western Australians with the skills and knowledge that relate to the functions and role of DEC.
- To support and strengthen the links between schools, the community, DEC districts and activities throughout the state.
- To complement existing formal education by encouraging the accreditation and recognition of skills and competencies during training.
- To provide a career pathway for employment in natural resource management, including entry into DEC's graduate development program and traineeships.

BELOW Corrigin Senior High School on Clean Up Australia Day.





Participation

Bush Rangers WA cadets

In semester one 1,568 cadets (54 per cent male and 46 per cent female) were enrolled and in semester two 1,396 cadets (53 per cent male and 47 per cent female) were enrolled. Bush Rangers WA cadets and adult volunteers contributed 286,755 volunteer hours in 2010. The year started with 41 active units, a further five units started during the year and four more units applied during the year to commence at the start of 2011.

Bush Rangers is a very inclusive program, encouraging the acquisition of new skills by a broad range of students. In 2010 236 cadets (15 per cent) were reported as Aboriginal, which is an increase from last year. Six per cent were born overseas and six per cent have disabilities. (Only 76 per cent of units reported their equity and diversity statistics so actual representation by each group may be greater.)



ABOVE
Esperance Senior High School cadets walking at Lucky Bay.

LEFT
John Forrest Senior High School cadets mountain biking.

BELOW
Mullewa cadet with newly planted 'conservation garden'.





ABOVE LEFT
Kolbe Catholic
College planting.

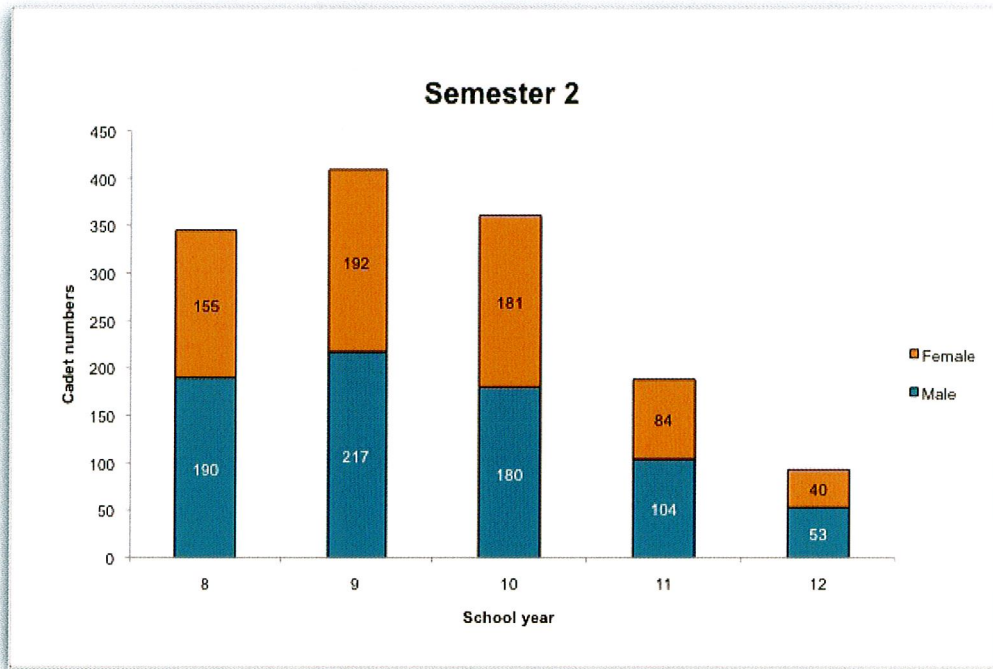
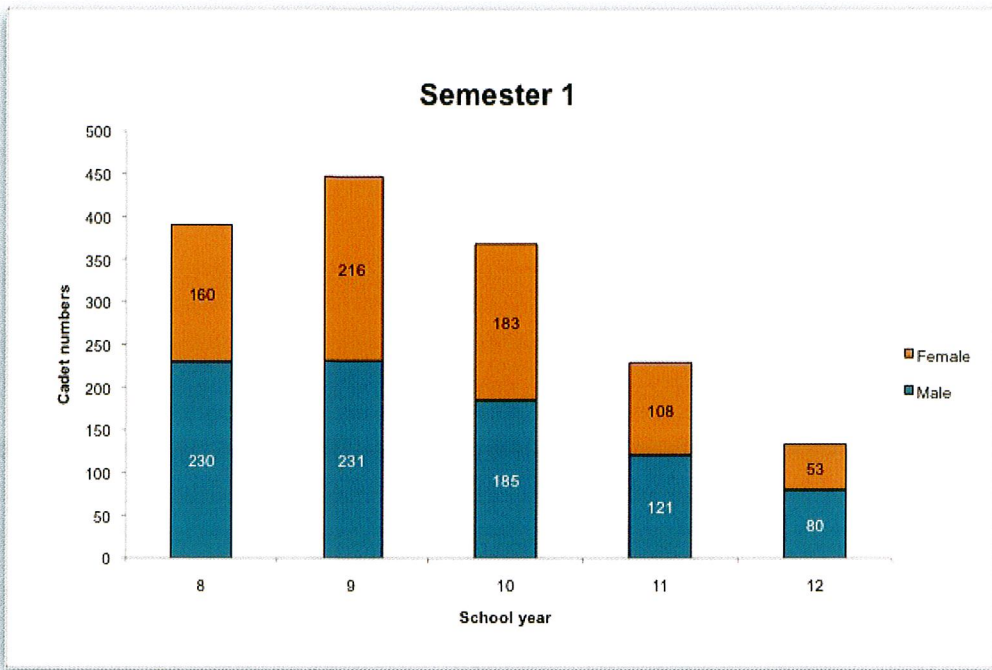
ABOVE RIGHT
Kununurra District
High School cadet
takes part in a
biodiversity survey.



LEFT
Albany ESC cadets
testing water quality
at Princess Royal
Harbour Ponds.

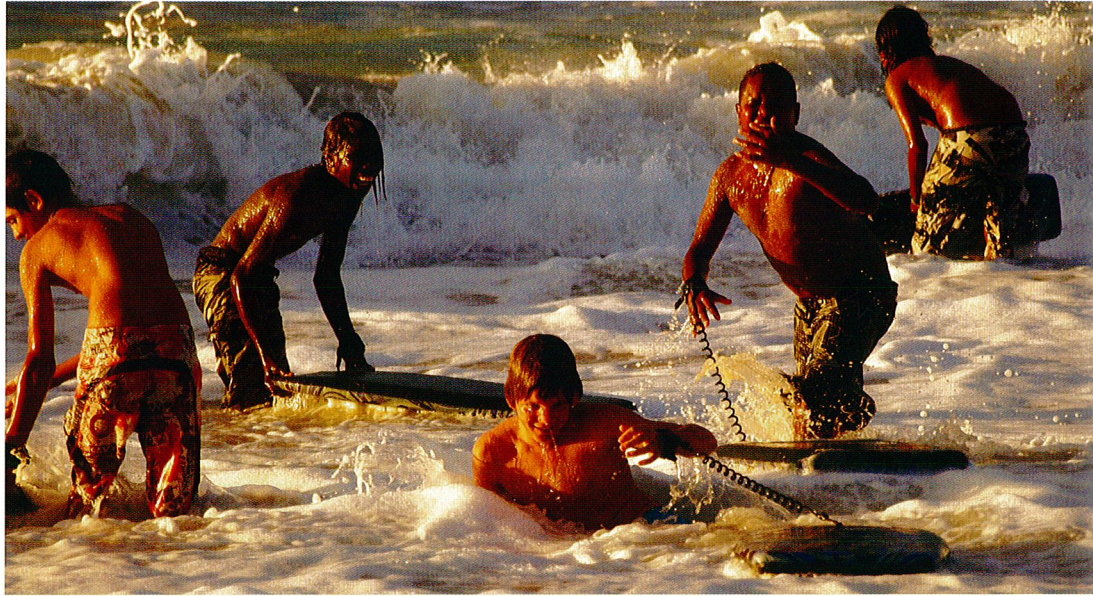
"As a beginning cadets group, we were feeling our way with a lot of the activities we gave our students. They are disengaged students who often feel that nothing is relevant unless it directly involves them. It is important to get the students motivated and enjoying what they are doing ... I am encouraging the students to become more involved in their natural environment through excursions and plan to continue these next year. We have planted a native garden at the front of the school and I hope to complete a shade house and encourage growing native plants and a kitchen garden. The students are enjoying working outside—even those who threw their hands up at the start of the project and said they wouldn't be doing anything. They now join in even if it is watering, while others weed and turn the soil over."

Sharonne Thompson, Armadale Senior High School STEP program



Focus on the Pilbara and Kimberley

During the past three years the Bush Rangers program has grown throughout the Pilbara and Kimberley. Many of these schools report that the Bush Rangers program is an important part of engaging and retaining students in school. Following on from the successes of the Onslow and Kununurra Bush Rangers units, Fitzroy Valley High School started a Bush Rangers unit in 2010 and both Derby and Wyndham will commence with the program 2011.



FROM TOP
Onslow cadets
enjoying the surf;
practising boat skills;
assisting with fencing
at Waroora Station.



Onslow Bush Ranger cadets

"This is the third year of the Onslow Bush Ranger cadets. In the three years since our establishment, we have witnessed a lot of growth and changes in our small unit. Bush Ranger cadets play a significant role in our Secondary School Engagement Program (SSEP). Onslow Secondary is a remote school with small numbers, catering from years 8 to 12. Over the year our numbers have fluctuated due to the transient nature of our students (70 per cent are Indigenous), however we have managed to keep a consistently attending core of 12 students. This has been a huge increase in the numbers of regular attending students from years prior to the SSEP. Some of this can be attributed to the high interest, practical nature and relevance of the Bush Ranger cadets course.

This year the cadets have participated in a range of activities and learning experiences. Our Bush Ranger cadets unit is integrated with our Society and Environment, English and at various times Design and Technology. This holistic approach to teaching allowed us to both maximise student output and develop essential literacy skills across the curriculum. In the first term students participated in map reading, compass reading, GPS reading and orienteering (which included a half-day excursion around a course). Students also studied for and completed their skippers tickets, which they then used for mud crabbing and fishing excursions. For Design and Technology, students made a range of camping tools and signs for Waroora Station."

James England, unit leader

Fitzroy Valley District High School Bush Ranger cadets

"Being our first year of operation at the school, we focussed on equipment and student participation throughout the year. Having a predominantly Aboriginal student population, we are faced with the problems of absence from school and fluctuating attendance. Next year we will be focussing on instructor development and excursions to keep the students interested in the program. Our move to include the whole high school in the program not only shows how important we see the Bush Rangers unit at our school, but also gives our students opportunities to succeed outside the classroom environment. We plan to implement a unique model where students will be grouped according to language group so we can seamlessly integrate important cultural learning with our Aboriginal staff, including language and learning on country."

Drew Bartram, unit leader



LEFT
Kununurra District High School cadets mountain bike training on the Gibb River Road.

Wyndham District High School Bush Rangers cadets

"Wyndham District High School has been developing a model to change the culture of our school community where respect of self and others, high expectations and a positive attitude are at the core of the work and choices that we make every day. The school has developed a values program based on the Six Kinds of Best which underpins our vision and mission statements and the key priorities for the school. The Six Kinds of Best is a play on the word 'kind'. We teach students to be Kind to Yourself (respect yourself), Kind to Others, Kind to the Environment, the Learning Kind (seek learning), the Achieving Kind (achieve your potential) and the Community Kind (contribute positively to society). The school believes that the Bush Rangers program will compliment and enhance the principles that we are striving to develop in our students."

Mark Williams, Principal

Bush Rangers WA unit leaders and instructors

In semester one, 190 adult instructors were enrolled and this decreased to 180 in semester two. Out of the adult instructors 13 were former Bush Rangers WA cadets and two were from other cadet programs (Emergency Services and Army).



RIGHT
Ex-cadet Sally Cooper, now
instructor at Rossmoyne.

Bush Rangers WA units

At the start of 2010 one unit closed. Four new units opened in February 2010 in Armadale Senior High School STEP, Cue Primary School, Dale Christian School and Fitzroy Valley District High School, while Mandurah Senior College commenced in June.



RIGHT
Cadets from the
Goldfields Bush Ranger
unit planting shrubs at
Kalgoorlie Arboretum.

Bush Rangers units in Western Australia, 2010



Certificates of Promotion and WA Certificate of Education

In 2010, 240 Certificates of Promotion were issued (three cadets completed two levels). A Certificate of Promotion is issued to a cadet by the Bush Rangers WA Program Coordinator when the requirements for a training level have been met. Fourteen Bush Rangers WA units had cadets enrolled in Bush Rangers WA with the Curriculum Council and 173 students earned WA Certificate of Education (WACE) points for their efforts.

Many units celebrate their cadets' achievements in advancing levels within the program with promotion parades or presentation nights. This is also a great opportunity for cadets to communicate to parents some of the activities and projects the unit has completed.

Cadets working towards level three study a new module—leadership in nature conservation. Some Bush Rangers units organise specialist camps to help with leadership training. Cadet leaders then mentor younger cadets through activities.

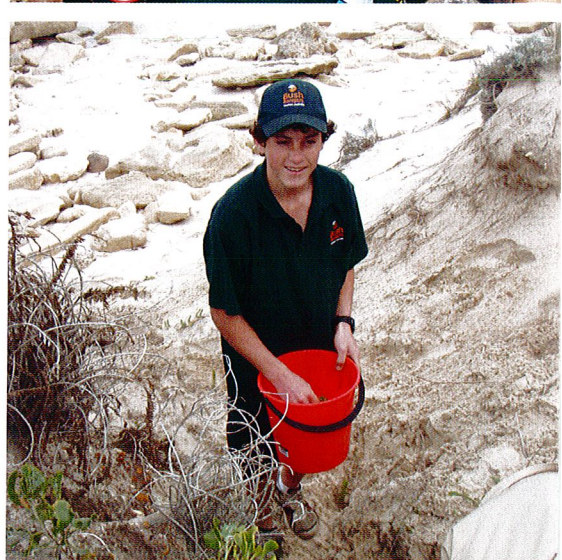
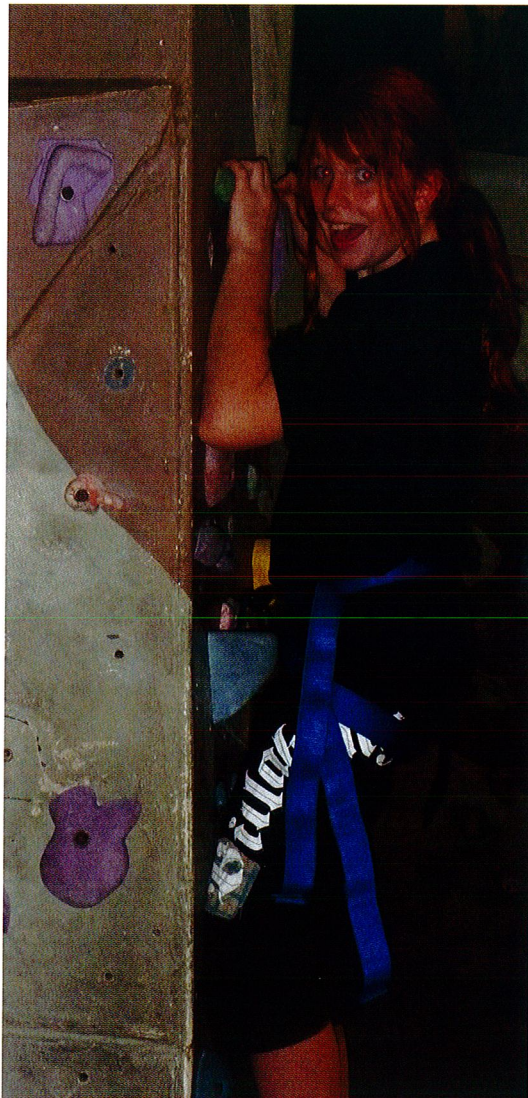
“At the end of each school year, around 35 of the Newton Moore Bush Ranger cadets embark on a journey to the incredible island of Rottnest. We call this our Leadership Camp. Whilst in Rottnest we accomplished a number of long, challenging bike rides around the island, the longest being on the first day in which we rode 30 kilometres to the West End, up and down the massive hills. But the reward swim and snorkel was well worth it. Throughout the four days we also participated in a number of activities, including snorkelling, night rides, beach clean-ups, orienteering, and various tours around the island. We also went on a ghost walk through the old war sites and cemetery at night. This was organised by our fellow cadets and leaders ... This camp was a rewarding experience for all and we can't wait until next time.”

Newton Moore cadet

RIGHT
Carmel Adventist College
cadet on climbing wall.

FAR RIGHT
Thornlie Christian
College cadet on
Rottnest camp.

BELOW FAR RIGHT
Esperance Senior High
School cadet planting to
help dune restoration.

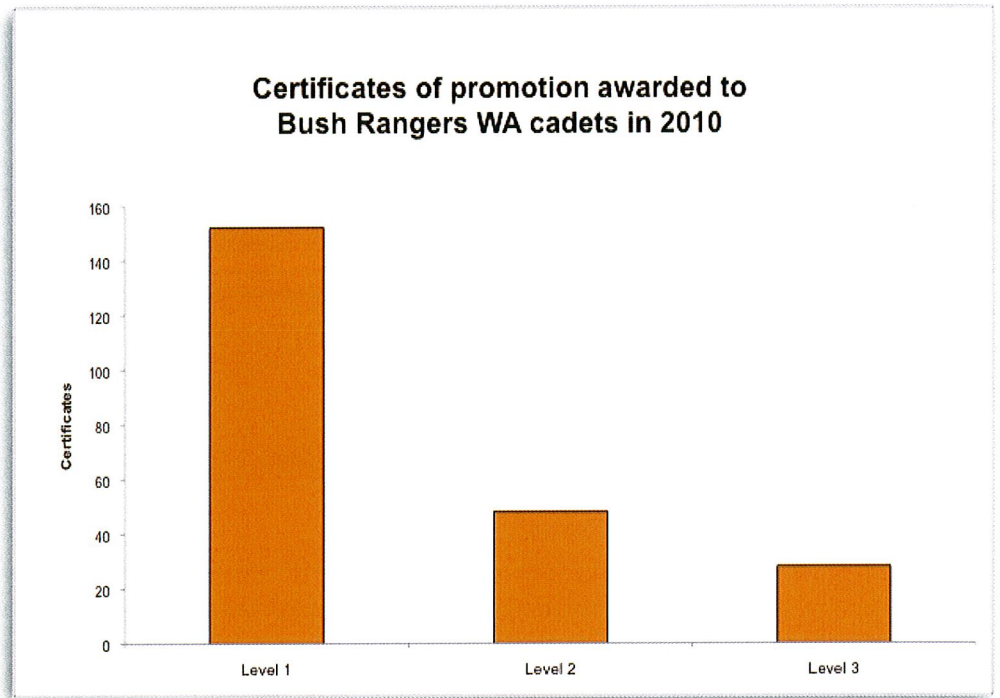


“Our presentation night was another great night, celebrating a great fifth year at Mercy College. The program is a valued part of the extracurricular activities offered by the college and we look forward to another great year in 2011.”

Matthew Byrne, unit leader

“I would like to commend the outstanding contribution of our cadet leaders in 2010; they were hard working, showed a great deal of initiative and were outstanding role models for other cadets.”

Geographe Bush Ranger cadet unit



BELOW
Kolbe Catholic College
whole unit at Camp Kelly.



Instructors and unit leaders



RIGHT
Manjimup cadets strengthening team building and leadership skills.

Capacity building

The skills and abilities of the volunteer adult instructors contribute to providing exciting conservation opportunities for Bush Rangers WA cadets. Instructors are provided with yearly training from DEC at the annual conference and many undertake other training to meet the needs of their unit.

Bush Rangers WA annual conference

The annual conference for volunteer unit leaders and instructors was held at Point Walter Recreation and Conference Centre between 7 and 9 March 2010. Forty-four adult volunteers from 26 units took part in the two-day program. The conference also provides an opportunity to welcome new instructors to the Bush Rangers program, with 21 new instructors attending.

In celebration of the International Year of Biodiversity, the Program Coordinator challenged instructors with EcoEducation's biodiversity quiz—an incursion program that also proved to be a great icebreaker. The next morning got off to a banging start with instructors taking part in a drumming workshop.

“This was my first year taking on the unit as the leader and, wow, what a year! I have learned so much from this experience and I thank the volunteers, students and Bush Rangers for such an amazing year and I am looking forward to continuing as leader next year for my school.”

Sophie Sherlock, Clarkson Community High School unit leader

DEC staff presented many of the activities at the conference. Community Education gave presentations demonstrating how Bush Rangers units could take part in the various environmental behaviour change programs offered by the department. Instructors were charmed by Trevor Walley's Welcome to Country and interpretation of the significant cultural importance of the area around Point Walter, then heard an alternative interpretation of the natural environment from DEC Interpretation and Visitor Information Coordinator Gil Field. These experiences gave instructors the skills and experience to teach Module 8 (levels 2 and 3) from the new manual —“*Interpretation of the Natural Environment*”.

WA's Chief Scientist Lynn Beasley and EcoEducation's Senior Project Officer Elaine Horne promoted the effectiveness of citizen science, leading practical activities which demonstrated how to measure a 'biodiversity baseline' to monitor change in an area. Instructors took part in a planning and decision-making workshop, facilitated by DEC's Public Participation Planning Section, which enabled them to have input into the cadet camp planning process.

Twenty-nine conference delegates (66 per cent) participated in the evaluation survey. Sixty-six per cent of the responses agreed that the program content was relevant and 82 per cent supported the current format of the two-day event.



LEFT
Dressing up for drumming.



ABOVE Working on field studies with Elaine Horne.



ABOVE Instructors deep in decision making.

New manuals

Throughout 2010, units have started to make use of the new manuals and log books for recording cadets' achievements. Most units have now received training in the manuals and training of new units will continue into 2011. Initial feedback has been very positive.

"The Bush Ranger cadet unit at Albany Secondary Education Support Centre has had a very busy and successful 2010. We found the new log books simple to use and an effective way to record all the students' theory and practical work. During the year we contacted and used several DEC officers and rangers and we were extremely pleased with their efforts and information, even enquiring about modifying educational materials for our students with disabilities. We are grateful and thankful to all involved and also to the staff at the central office for their support."

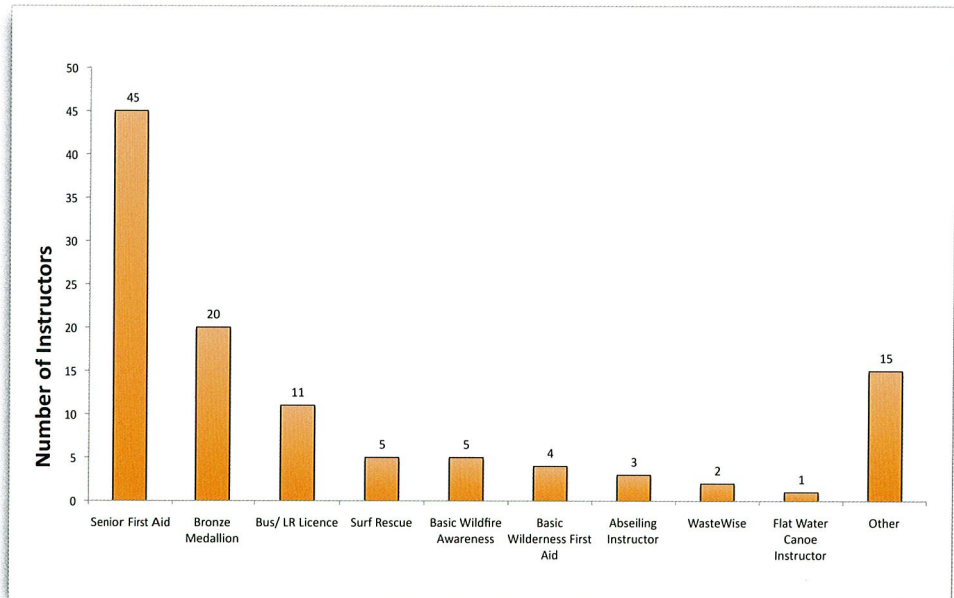
Georgina Mullins, unit leader

"As a new leader, commencing in Term 2, 2010, I have been most impressed with the program, the rewards opportunities, the manuals and logbooks. I have learned so much this year about the program and am especially eager to incorporate more activities with Emmanuel Catholic College Bush Rangers next year, to ensure students are obtaining the full potential and benefits that the program offers. It has been a year of many challenges, yet it has also been very exciting and rewarding."

Merryl Thomas, unit leader

Independent instructor development

Adult volunteer instructors take part in extra training to develop skills to meet the needs of individual Bush Rangers WA units. Including the annual conference and new manuals workshops, 32 units (70 per cent) reported on instructors developing new skills through participating in Bush Rangers WA.



"Within our group of instructors, we have a diverse team in terms of age range and varying skills and strengths. This diversity enables us to cover all the necessary aspects of the Kolbe Bush Rangers unit, including the administration, planning, science expertise, bus driving, water qualifications, senior first aid and food preparation to name a few. This makes for a very happy and welcoming environment."

Carol Henderson, unit instructor



RIGHT

Cadets and instructors learn from DEC scientists at Dryandra.

Instructors Awards for Excellence

The Instructors Awards for Excellence is an opportunity to acknowledge the time and effort unit leaders and instructors give to Bush Rangers WA. Winners are nominated by other instructors, school principals or DEC staff. A thank you dinner for the three winners was held on Friday 10 December 2010 with DEC's Director Strategic Development and Corporate Affairs Ron Kawalilak.



FROM LEFT
Elaine Horne,
Wendy Corrick,
Ron Kawalilak,
Hannah Hampson,
Darryl Deacon
and Andrew Paul.

Wendy Corrick, Rossmoyne Senior High School

Wendy has taken advantage of every opportunity provided by DEC and allowed her cadets to be involved in a number of rewards offered including Basic Wildfire Training, Perup Science Reward and the Perth Royal Show.

She is a very willing helper and always offers her assistance to DEC and other Bush Rangers units.

The cadets at Rossmoyne have been given the support and opportunity to gain their promotion levels and WACE achievements through Wendy's commitment to the unit.

Darryl Deacon, Duncraig Senior High School

Darryl has committed a lot of his time over the past five years to the Duncraig Bush Rangers unit. He has enlisted excellent instructor assistance and has an extremely well organised unit with almost 100 cadets which complete more than 20,000 volunteer hours to community service each year. A major achievement for the Duncraig unit has been the Tambellup Tree Planting Project.

Darryl is always willing to share with other unit leaders and DEC with his vast knowledge of the program. He continues to always support his cadets with gaining their promotion levels and WACE achievements.

Andrew Paul, Mount Lawley Senior High School

Andrew shows that he has a passion for the Bush Rangers program. He has been a unit leader for more than 10 years and he has great experience and continues to share his knowledge and enthusiasm with his cadets and other unit leaders in the program.

Andrew's commitment to the program has extended beyond the Mount Lawley area. He takes his cadets on camps across the state including to Shark Bay, Wellington, Karijini, Exmouth and Walpole assisting DEC staff with clean-up and maintenance efforts in national parks.

He is always willing to assist with his computer expertise, including thinking of fun and interesting ways to communicate about the unit. He continues to build relationships with other unit leaders in the program.

Reward experiences

DEC's annual reward experiences provide Bush Rangers WA cadets with unique opportunities to work with DEC staff in the field and develop skills and knowledge. The rewards all help Bush Ranger cadets gain a better understanding of methods for nature conservation; and they also contribute to personal growth. Each reward experience also helps cadets to achieve outcomes in: Module 1 (Bush Rangers' Qualities), Module 2 (The Practice of Nature Conservation) and Module 3 (Working Safely in Natural Environments).

Research at Perup Nature Reserve

Six cadets and three instructors from Rossmoyne Senior High School took part in this two-day reward experience in March 2010.

Based at Perup Nature Reserve, east of Manjimup, the cadets worked with technical officers from DEC's Science Division to learn about monitoring wildlife through fauna trapping, spotlight surveys and mapping vegetation. In addition to the skills learned at each of the reward camps this experience assists cadets to achieve outcomes in Module 5 (The Meaning of Conservation) and Module 8 (Winning Back Wildlife).



ABOVE RIGHT
Rossmoyne cadets
preparing bait.



RIGHT
Perup Bush Rangers with
DEC's Bruce Ward and
Graeme Liddelow.

Anita Kumar, Rossmoyne Senior High School

"Huddled in a hired 12-seater Toyota bus loaded with prime sandwich ingredients, six Bush Rangers and three Bush Ranger leaders took the five-hour drive to Perup where we would be given a practical understanding of animal research.

During our stay in Perup our main focus was the trapping and recording of animals and their characteristics within this area. To achieve this we created our own batch of bait—a wicked combination of sardines, barley, tuna, oats and peanut butter—to be placed in a number of harmless animal traps, cages that would shut when an animal stepped on the cage's trigger as it entered. We were divided into two groups, which each followed different trails, setting the traps covered by hessian sacks and bushes 100 metres apart on either side of the trail, before heading back to the dorms.

Early each morning we checked our traps for animals, recording their tag number, weight, age, sex, size and type. If the animal wasn't wearing an identification tag we put one on. Over our Perup stay we managed to capture one woylie, five chuditch and 43 brush-tailed possums in total.

Perhaps the most exhilarating part of the recording, apart from handling the animal, was releasing the animal and watching it readjust to its environment, bound away and scurry up the closest tree.

Apart from trapping animals we spent one night spotlighting for various animal species in the eerie quiet of the bush. We also inspected the types and number of animal diggings in a particular area of the bush that had recently been burnt. This was because the number of animal diggings would have increased due to more plants germinating and being available in greater quantity to the animals. We came across a large number of bandicoot diggings and even a couple of chuditch and woylie diggings."



ABOVE LEFT
A Rossmoyne cadet weighs a bagged animal.

LEFT
Setting a trap.



Expedition to Shark Bay World Heritage Area

Two week-long expeditions went to Shark Bay in 2010. The first involved 11 Bush Rangers WA cadets and three instructors from Mount Lawley Senior High School in April. The second involved six cadets and two instructors from Geographe Education Support Bush Ranger cadet unit in October.

This reward experience gives cadets an exposure to the daily work projects and maintenance of François Péron National Park, as well as the Monkey Mia Conservation Park. Cadets also assist with the maintenance of threatened species enclosures at Project Eden. The experience is hard work and helps cadets to achieve outcomes in Module 6 (Environmental Management), Module 7 (Parks, Reserves and Landscape Management) and Module 8 (Winning Back Wildlife).

RIGHT
Mount Lawley cadets
with DEC's Roger
Whitelaw.

BELOW RIGHT
Mount Lawley cadets
dolphin watching before
work starts for the week.

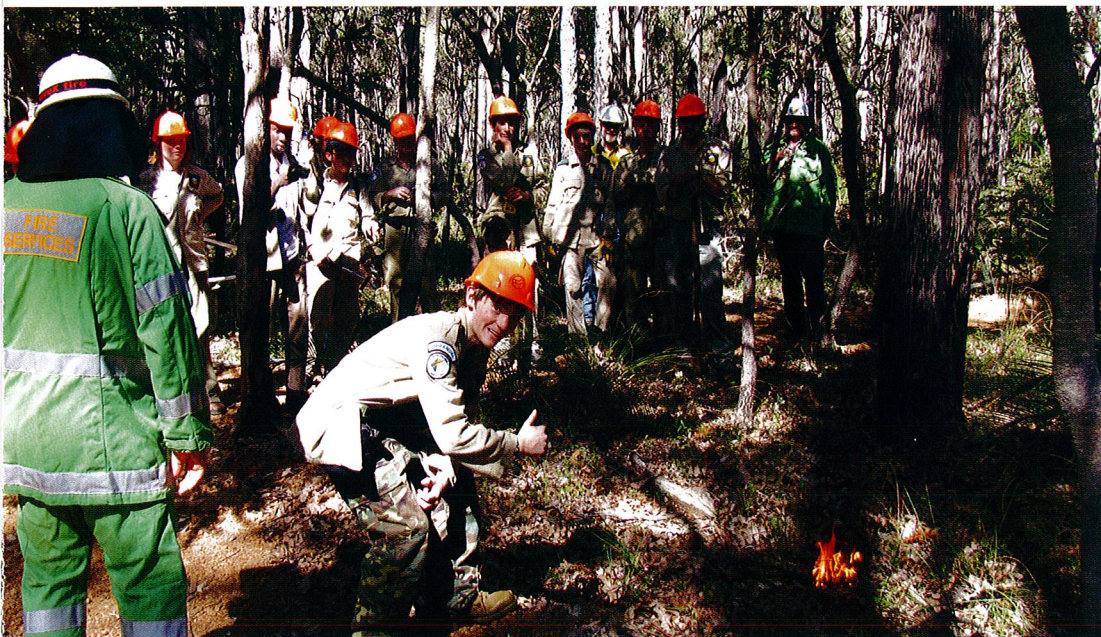


Basic wildfire awareness

Each year DEC's Fire Management Services Branch offers a reward camp for cadets to give them an insight into their roles and responsibilities. The first day involves training in the nationally accredited Basic Wildfire Awareness course, with a theory test. This is followed by conducting a prescribed burn around the Dwellingup Forest Heritage Centre, as long as suitable weather conditions prevail. Each year the cadets burn a different 'cell' of a pre-defined area around the centre. This has created a good demonstration of the mosaic of different ages of forest regeneration after a burn that Fire Management Services aims to complete on a larger scale in the south-west forests. The mosaic helps to promote biodiversity and the burn also contributes to the protection of the centre and the town of Dwellingup itself.



ABOVE LEFT
Emmanuel cadet with DEC's Alex Moylett and George Laws.



LEFT
Emmanuel cadet starting the prescribed burn.

The second day starts by returning to the fire site to complete the all-important task of mopping up—making sure embers have died down and are a sufficient distance within the burn boundary to safely leave. Once complete, the cadets return to the training centre to learn about health and fitness for the front fire line, meal planning and stress-management techniques from DEC's Risk Management Section. The experience contributes to cadets' understanding in Module 6 (Environmental Management) and Module 7 (Parks, Reserves and Landscape Management).

Four Bush Ranger cadets and two instructors from John Forrest College, along with three cadets and one instructor from Emmanuel Catholic College and the EcoEducation Senior Project Officer, took part in the Basic Wildfire Awareness reward experience in October 2010.

Unit reward camps

DEC district offices and individual units provide a range of reward experiences tailored to their units.

“This year saw the Atwell College cadets undertake the first Coral Bay and Karijini tour. This undertaking was a reward camp for the cadets who had been in the program for two or three years and gave senior cadets the opportunity to achieve outcomes in levels 2 and 3. The focus for 2011 will be developing a conservation project which will be entirely the responsibility of the unit.”

Linda Harrup, unit leader

RIGHT
Atwell College cadets
at Coral Bay.

BELOW RIGHT
Northam cadets at the
Tropic of Capricorn.

BOTTOM RIGHT
John Forrest cadets
at Rocky Pool.

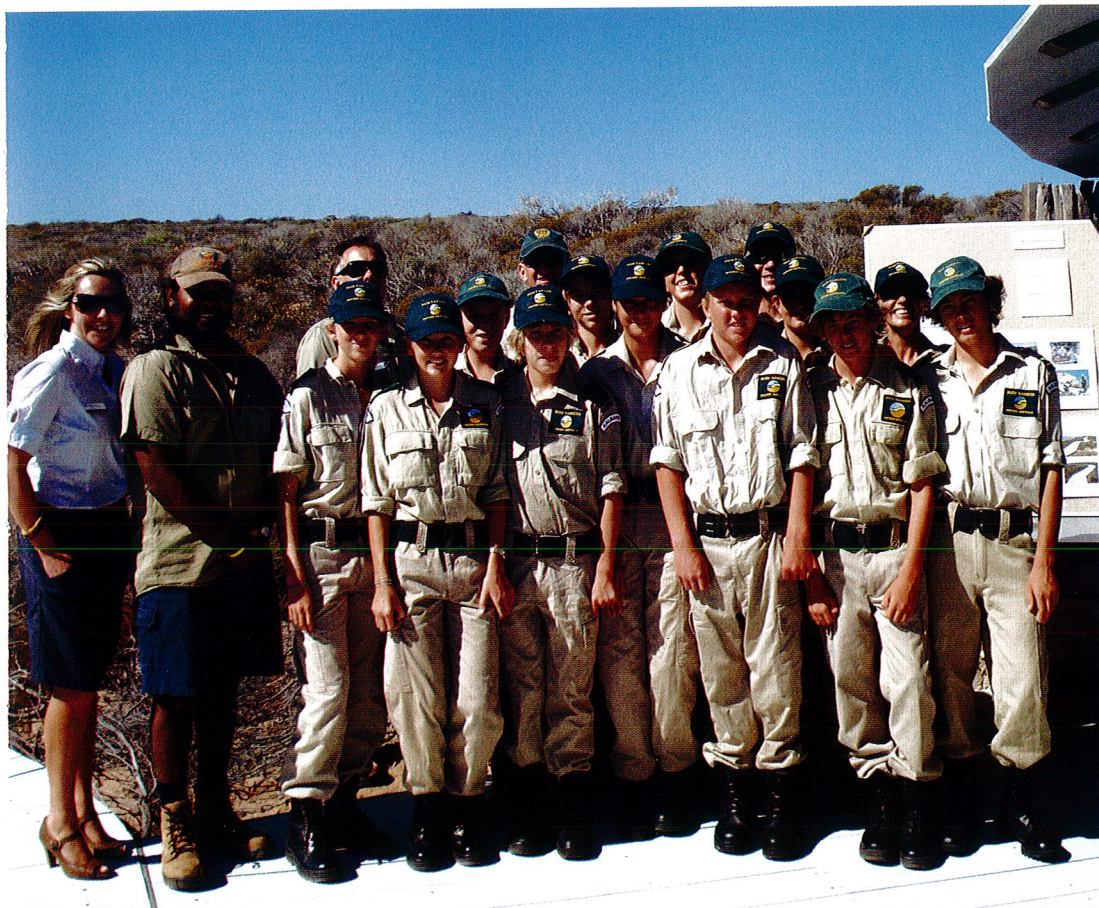


Communicating about Bush Rangers WA

The links between DEC, schools and communities are strengthened through communication activities. This section reports on unit communication activities and special events.



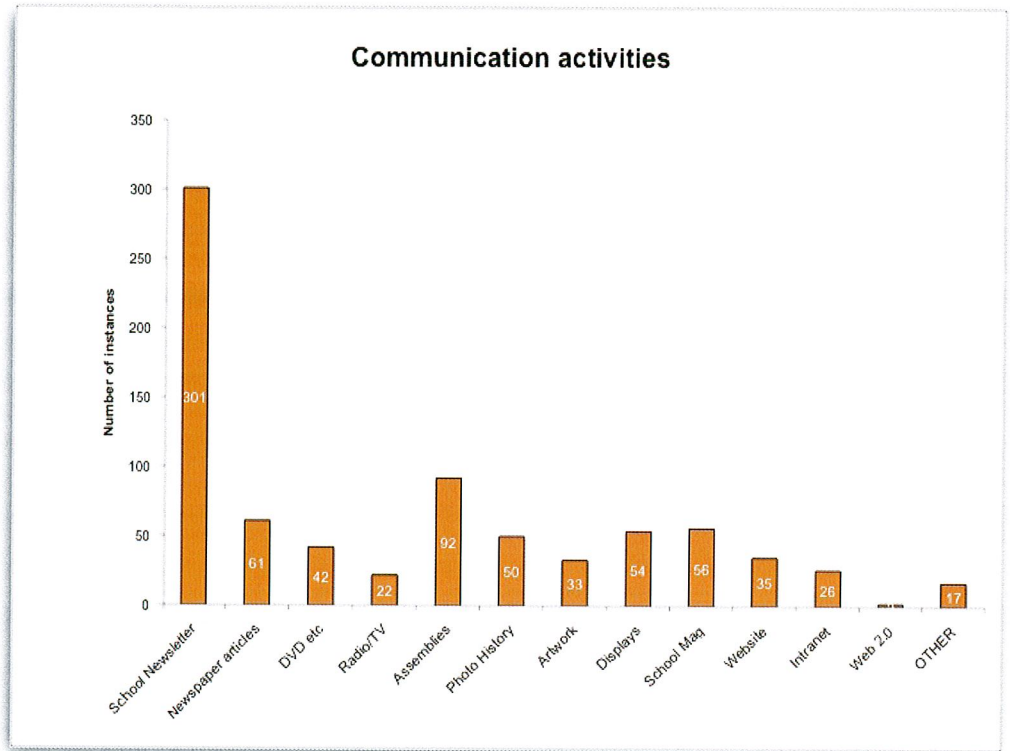
LEFT
John Forrest cadets at an ANZAC parade at Embleton Age Care.



BELOW LEFT
Kalbarri cadets at a book launch.

Unit communication activities

School newsletters and assemblies were again the most popular methods used by Bush Rangers WA units to communicate with their school and community.



DEC publications

Bush Rangers featured in two DECmatters stories—DEC's online staff news bulletin.

Perth Royal Show, 25 September to 2 October 2010

One hundred and three cadets and 20 volunteer adult leaders from five Bush Rangers WA units (Kolbe Catholic College, Rossmoyne Senior High School, Mount Lawley Senior High School, Emmanuel Catholic College and Dale Christian School) gave their time to sharing the conservation message at the 2010 Perth Royal Show. The site included exhibits and activities from a range of organisations and had 15,843 visitors over the week.

The Bush Rangers WA activities for the Perth Royal Show were developed in partnership with EcoEducation, SERCUL and the Royal Agricultural Society.

DALE CHRISTIAN SCHOOL TO PERTH ROYAL SHOW

During the past Perth Royal Show, the Bush Ranger cadets had the privilege to help look after the Nature and Conservation stall. The cadets of Dale Christian School had lots of fun during their shift. Some of the duties for the day included sweeping the walkways, watering plants, spraying water over dusty walkways as a health risk precaution and handing out bookmarks. A very important duty was to count all visitors to the Conservation and Landcare Exhibit to prove how popular the exhibition was. The counting happened every half an hour and had to be taken for five minutes. During our shifts we were also treated with the Wadumba Dance Group, performing a few Indigenous dances to the tune of a didgeridoo. Their group leader is the famous James T Webb who plays the didgeridoo in the 4x4 television advertisement. Our group also had some free time to explore the rest of the show. Thanks to DEC who enable us to take part in this excellent experience."

Anno Drent, unit leader

LEFT

Carmel Adventist College cadet at Sustainability Fair.



For more information

If you are interested in volunteering with a Bush Rangers WA unit or have a project that cadets can help with please contact:

Program Coordinator, Bush Rangers Western Australia
Department of Environment and Conservation
Locked Bag 29, Bentley Delivery Centre, WA 6983
Tel: (08) 9334 0137



LEFT
Albany Education Support Centre cadets assisting with dune repair.



BELOW LEFT
Kolbe Catholic College cadets rubbish clean-up.

BOTTOM LEFT
Corrigin Senior High School learning leadership skills on a flying fox.



Appendix 1 – Volunteer hours

<i>Unit</i>	<i>Weekly meetings</i>	<i>Camps</i>	<i>Preparation</i>	<i>Total</i>
Albany Secondary Education Support Unit	1302	3584	234	5120
Armadale Senior High School STEP	3240		112	3352
Atwell College	3520	4950	20	8490
Bunbury Cathedral Grammar School	420	1440	112	1972
Canning Vale College	960	1980	102	3042
Carmel Adventist College	1762	1468	84	3314
Clarkson Community High School	2824	2012	1036	5872
Clontarf Aboriginal College	1024	1536	88	2648
Coodanup Community College	2624	3506	74	6204
Corrigin District High School	780	1440	100	2320
Cue Primary School (Secondary students)	20	18	2	40
Dale Christian School	*1176	*1882	*60	*3118
Duncraig Senior High School	4316	18,327	830	23,473
Ellenbrook Christian College	2400	5976	88	8464
Emmanuel Catholic College	2652	3632	177	6461
Esperance Senior High School	92	2025	56	2173
Fitzroy Valley District High School	2061	864	168	3093
Geographe Education Support Centre	2100	8200	280	10,580
Goldfields Baptist College	*2184	*3494	*75	*5753
Jerramungup District High School	*924	60	60	1044
John Forrest Senior High School	1680	2464	139	4283
John Septimus Roe Anglican Community School	3840	19,008	172	23,020
Kalbarri District High School	665	1883	68	2616
Katanning Senior High School	770	704	123	1597
Kolbe Catholic College	4000	6000	330	10,330
Kununurra District High School	9418	2148	50	11,616
Leonora District High School	20	140	80	240
Mandurah Senior College	6300			6300
Manjimup District High School	1088	1214	120	2422
Meekatharra District High School	5280	2640	41	7961
Mercy College	1200	4500	82	5782
Merredin Senior High School	2		1	3
Mount Lawley Senior High School	*2352	*3763	*120	*6235
Mount Magnet District High School	1145			1145
Mullewa District High School	1008		48	1056
Mundaring Christian College	9800	7460	275	17,535
Newton Moore Senior High School	2880	1800	2220	6900
Northam Senior High School	2730	12,200	1590	16,520
Onslow School	3000	3600	200	6800
Roleystone District High School	1344	3522	146	5012
Rossmoyne Senior High School	2993	8203	510	11,706
Thornlie Christian College	2240	3504	115	5859
Wagin District High School	*1008	*1613	*30	*2651
Warnbro Community High School	2625	6400	152	9177
Waroona District High School	120	400	300	820
Wongutha CAPS	5386	7200	50	12636
			Total	286,755

* Estimates based on minimum attendance

Appendix 2 – Unit activities

Bush Rangers unit	Activity	Partners
Albany Secondary Education Support Unit	<p>Albany Museum – Lore and Boodja – Noongar Law and land bush tucker and tools tour</p> <p>Keep Australia Beautiful Adopt-a-Spot at Salmon Holes (Torndirrup National Park) and Marine Drive boardwalk</p> <p>Mokare Road Albany Project – invasive weed eradication</p> <p>Orientation camp – Camp Quaranup</p> <p>Clean Up Australia Day</p> <p>Battery collection and recycling</p> <p>ANZAC Day parade, Albany</p> <p>Wellington National Park camp – bush survival and orientation skills</p> <p>Healthy Waterways Project – Torbay Catchment, Undeyup Creek weed eradication and planting and Lake Powell weed eradication</p> <p>Princess Royal Harbour Ponds, Albany – salinity testing and microinvertebrates experiments and collection data</p> <p>Two Peoples Bay dune rejuvenation planting</p> <p>Fitzgerald River National Park camp – biodiversity, feral animal control and park management</p> <p>Mount Martin Regional Botanic Park – park clean-up and putting in posts on path for water deviation</p> <p>Dryandra Woodland camp – trapping and releasing animals, basic guide to tracking animals</p>	<p>Albany Museum</p> <p>Keep Australia Beautiful Council/DEC Albany Region</p> <p>City of Albany Bushcare and Reserve Unit</p> <p>DEC Albany and Camp Quaranup</p> <p>Clean Up Australia Day Council and Albany Secondary Education Support Centre</p> <p>Battery World Albany</p> <p>RSL Albany Sub Branch</p> <p>Western Australian Disabled Sports Association</p> <p>Department of Water</p> <p>DEC – Ribbons of Blue</p> <p>DEC – Two Peoples Bay, Albany</p> <p>DEC – Fitzgerald River National Park</p> <p>DEC – Albany</p> <p>DEC – Narrogin</p>
Armada Senior High School STEP program	<p>Stick insect kit (Project – Educational Kit)</p> <p>Butterfly Kit (Project – Educational Kit)</p> <p>Aboriginal Culture Program Yrs 8-12</p> <p>Monkey See, Monkey Do</p> <p>Education motivational games</p> <p>Garden supplies</p> <p>Nesting boxes (kits)</p>	<p>Butterfly Dreams</p> <p>Butterfly Dreams</p> <p>DEC – Perth Hills Centre</p> <p>Perth Zoo</p> <p>Australian Geographic</p> <p>Bunnings</p> <p>Garden Express</p>

Bush Rangers unit	Activity	Partners
Atwell College	<p>Rottnest Island</p> <p>Jurien Bay</p> <p>Karijini/Coral Bay</p> <p>Tree planting in Jandakot Regional Park</p> <p>Snake handling course</p> <p>Bush survival course</p>	<p>DEC</p> <p>City of Cockburn</p> <p>Vanessa – Bush Wisdom Survival</p> <p>Vanessa – Bush Wisdom Survival</p>
Bunbury Cathedral Grammar School	<p>Cryptic orienteering: compass use, review and compass work and distances</p> <p>Phantom Walker</p> <p>Tree planting at Dalyellup, Coast Care – Chris Gibbs</p> <p>Team work games: <i>Floating Rod</i> and <i>Toxic Waste Site</i></p> <p>Building and painting possum, parrot and bat boxes</p> <p>Macroinvertebrates investigating</p> <p>Binoculars and birdwatching</p> <p>School clean-up</p> <p>Beach clean-up</p> <p>Analysis of rubbish collection</p> <p>Camps – school camp term 1</p> <p>Camp – term 2 Wellington Discovery Forest: <i>Fire – A force of life and Sensational trail</i></p> <p>Camp – term 4: Wharneckliff Mill (cancelled due to sickness)</p> <p>Camp – term 4: Wellington Discovery Forest</p>	<p>South West Catchment Council</p> <p>Tangaroa Blue</p> <p>Tangaroa Blue</p> <p>Explorus</p> <p>DEC EcoEducation</p> <p>DEC EcoEducation</p> <p>DEC EcoEducation</p>
Canning Vale College	<p>Mar/Apr – camp at Mundaring; cadet levels, weeding</p> <p>June – camp at Gloucester Lodge, Yanchep National Park: cave tour, koala talk, Indigenous culture experience, weeding/conservation work, team-building activities, trail walks and photography</p> <p>Aug – Schools Tree Day; tree planting, rubbish removal, weeding</p> <p>Sept – CPR course and crash-course first aid through St John Ambulance</p> <p>Sept – 2009 cadet of the year attended a think-tank organised by SSEP teacher at CVC, attendees representing local council and various government and other organisations to discuss sustainability project</p>	<p>DEC</p> <p>DEC</p> <p>CVC SSEP students</p> <p>CVC Ed Support students. City of Gosnells</p> <p>Angela Sommerville – CVC school nurse</p> <p>Kate Bamford, volunteer instructor and 2009 CVC cadet of the year</p>

Bush Rangers unit	Activity	Partners
Canning Vale College (cont'd)	<p>Nov 2010 - two-day planning session for 2011, attended by former cadets and current Year 11 and 12 cadets</p> <p>Dec 2010 - Camp at Yanchep National Park. Activities include visits to AQWA, Ern Halliday Rec. Camp for cycle tour and extreme team-building activity, conservation work, cockatoo talk, cadet competencies, Gin Gin Observatory, kite making and flying</p>	<p>DEC - Yanchep National Park DEC AQWA Ern Halliday Rec. Camp Gin Gin Observatory</p>
Carmel Adventist College	<p>Continued work on creation and maintenance of bush track in college bushland</p> <p>Creation of worm farm for recycling organic waste at the college</p> <p>Development of area to be used for raising seedlings on college property</p> <p>Maintenance on Munda Biddi Trail - adoption of a section</p> <p>Leave No Trace EcoEducation program at Mundaring</p> <p>Set up and help with the Sustainability Fair run by Friends of the Environment</p> <p>Reptile education and first aid</p> <p>Clean-up of verge areas of roads around the college</p> <p>Recycled paper making, used to make and sell gift tags</p> <p>Fungi and orchid identification walks</p> <p>Mountain biking - Dwellingup camp</p> <p>Advanced bush craft and Kullari the Gecko program - Dwellingup camp</p> <p>Rock climbing</p> <p>Development of own survival kit</p>	<p>Carmel Adventist College</p> <p>Carmel Adventist College</p> <p>Carmel Adventist College</p> <p>Munda Biddi Foundation</p> <p>DEC - EcoEducation</p> <p>Friends of the Environment (FOTE)</p> <p>Bob Cooper Survival</p> <p>Dwellingup Adventures</p> <p>Dwellingup Adventures</p> <p>The Hangout</p> <p>Carmel Adventist College</p>
Clarkson Community Learning Centre	<p>Waste Wise incursion - landfill and reduce, reuse and recycle education</p> <p>Worm Shed incursion - worms' role in waste management</p> <p>Drum percussion workshop</p> <p>Made recycled paper from used paper and newspaper</p> <p>Aboriginal experience excursion</p> <p>Weeding at Yanchep National Park</p> <p>School recycling program ongoing throughout the year</p> <p>Nurtured two worm farms</p>	<p>DEC - Waste Wise, Merriwa Primary School</p> <p>The Worm Shed Chittering Valley, Merriwa Primary School</p> <p>Repercussions African and samba-style percussion and performance group workshops</p> <p>Merriwa Primary School</p> <p>DEC - Yanchep National Park</p> <p>DEC - Yanchep National Park</p> <p>Clarkson Community High School</p> <p>Clarkson Community High School</p>

Bush Rangers unit	Activity	Partners
Clarkson Community Learning Centre (cont'd)	<p>Adopted three endangered tree frogs from the Kimberley who now live in a vivarium in the Learning Centre</p> <p>Kings Park Art exhibition – students painted Western Australian flora and fauna that are classed as threatened and the art will be displayed in Kings Park this year</p> <p>Quinns Bushland excursion – students investigated biodiversity by marking out grids in the bushland and investigating the different species of plants</p> <p>Keep Australia Beautiful Day – collected rubbish around the school</p> <p>Aboriginal dot painting</p> <p>Investigated biodegradable materials – buried different types of waste in the school garden and dug them up after four weeks to compared the biodegradability of different materials</p> <p>Waste Wise incursion – students sorted through the whole school's waste, weighed it and compiled the data, which was then sent off to Waste Wise. Information will be compiled and a report issued outlining where we can reduce the waste within our school</p> <p>Tree planting of 200 trees and rubbish collection at Quinns Bushland</p> <p>Excursion to Perth Zoo – students participated in the 'Animal Allsorts' educational activity, where they learned about native Australian animals and fed two flying possums</p> <p>Team building and self esteem enhancing camp to Moore River</p> <p>Rottnest camp – students participated in adventure challenges, beach clean-ups, and sustainable living programs</p> <p>Clarkson Bush Rangers adopted Ridgewood Reserve, a bushland in the local area. Students will be involved in the conservation of this local bushland</p>	<p>DEC (permit) and Wet Aussie Reptiles (frogs)</p> <p>Kings Park and Botanic Gardens</p> <p>Merriwa Primary School</p> <p>Clarkson Community High School</p> <p>Merriwa Primary School</p> <p>Merriwa Primary School</p> <p>DEC – Waste Wise</p> <p>City of Wanneroo</p> <p>Perth Zoo</p> <p>Guilderton caravan park, Moore river charters and tours</p> <p>Rottnest Island</p> <p>Adopt a Bushland, City of Wanneroo</p>
Clontarf Aboriginal College	<p>Planting native trees around Clontarf Aboriginal College</p> <p>Clontarf Aboriginal College Anzac Day ceremony</p> <p>Native garden and fruit/vegetable garden project</p> <p>Cleaning Clontarf Aboriginal College Canning River foreshore</p> <p>Weeding and preparing for planting native trees and seedlings around the Canning River and surrounding wetlands</p> <p>Recreational fishing sustainability</p>	<p>Clontarf Aboriginal College Clontarf Management Office City of South Perth</p> <p>Clontarf Aboriginal College Clontarf Management Office</p> <p>Clontarf Aboriginal College Clontarf Management Office</p> <p>Clontarf Aboriginal College Clontarf Management Office City of South Perth</p> <p>South East Regional Centre for Urban Landcare (SERCUL)</p> <p>Recfishwest</p>

Bush Rangers unit	Activity	Partners
Clontarf Aboriginal College (cont'd)	<p>Camp 1: Overnight camp at DEC Perth Hills Centre: Nearer to Nature discovering diversity and wildlife activities, baiting for foxes and trapping native animals, mountain biking and team building activities</p> <p>Camp 4: Rottnest reward camp, conservation activity with Rottnest Island Authority, conservation along beach and rocks, beach EcoEducation, bike riding, snorkelling and fishing</p>	<p>DEC Perth Hills Centre Nearer to Nature</p> <p>DEC EcoEducation Kanyana Wildlife Rehabilitation Centre Accommodation – Kingstown Barracks Rottnest Express ferry West Australian Caterers Rottnest Island Authority - Education</p>
Coodanup Community College	<p>Coodanup Foreshore clean-up</p> <p>Mandurah ferry excursion</p> <p>Zoo excursion</p> <p>Rehabilitate and clean up school environment, create new native garden at school for Bush Rangers and native birdlife, building and donating possum boxes, planting trees at Fairbridge Village</p> <p>Busselton camp – team building, canoeing, water sports, bushwalking, guided cave tour, dolphin observing at Bunbury</p>	<p>City of Mandurah Foreshore Rehab Officer</p> <p>Mandurah Ferries</p> <p>Alcoa donated seeds Fairbridge</p>
Corrigin District High School	<p>Snake encounter, compass work, water collection, bush survival skills</p> <p>March: Bush Ranger display at school fete</p> <p>June: Fairbridge camp – flying fox, bush survival</p> <p>March: Clean Up Australia</p> <p>July: National Tree Planting Day</p> <p>August: Tidy Towns clean up</p> <p>Camp – Fairbridge, Alcoa mine rehabilitation Children's Forest – Baldivis, Rockingham Environmental Centre</p> <p>Camp – Leschenaultia, Animal Encounters – Perth Hills Centre, night stalk at Karakamia</p>	<p>Bob Cooper Outback Survival – Vanessa Paget School P&C</p> <p>Fairbridge staff</p> <p>Tidy Town committee</p> <p>Corrigin Shire</p>
Cue Primary School (Secondary students)	<p>Excursion to Cue Volunteer Fire Station</p> <p>School sleepover and bush walk</p>	Cue Fire Station
Duncraig Senior High School	<p>Perth Hills Centre</p> <p>Tambellup community</p> <p>Grey coastal community</p>	<p>DEC – Perth Hills Centre</p> <p>Simpson families</p> <p>Dr Peter Sheppard</p>

Bush Rangers unit	Activity	Partners
Ellenbrook Christian College	<p>Leadership camp – Lake Leschenaultia</p> <p>EcoEducation – Leave No Trace excursion</p> <p>Tour Red Hill Waste Management Facility</p> <p>Survival course and snake handling</p> <p>Abseiling</p> <p>Junior cadet camp – Manjedal: leadership, teamwork, survival skills</p> <p>Full unit camp – Margaret River: hike Cape Naturaliste, tour Cape Naturaliste Lighthouse</p> <p>EcoEducation excursions (<i>Caring for places, Sensational night life</i>)</p> <p>Mammoth Cave tour and megafauna learning experience</p> <p>Cave, canoe and bushtucker tour</p> <p>Tree planting, Ellen Brockman sub-region revegetation program</p> <p>Leeuwin day trip – reward</p> <p>Native Bush Reserve – conservation area</p> <p>Extended artificial pond, planted trees, seedlings, seating areas</p> <p>First aid focus</p>	<p>Camp Leschenaultia</p> <p>DEC – EcoEducation – Perth Hills Centre</p> <p>EMRC – Tania Wells</p> <p>Bob Cooper Outdoor Education</p> <p>Adventure Out</p> <p>Scouts Australia</p> <p>Wharncliffe Mill accomodation, DEC Blackwood District</p> <p>DEC EcoEducation</p> <p>Caveworks</p> <p>Bushtucker tours</p> <p>Chittering Landcare</p> <p>Leeuwin Ocean Adventure Foundation</p> <p>Ellenbrook Christian College building and construction classes</p> <p>Tankmaster, Lullfitz Nursury</p> <p>St John Ambulance</p>
Emmanuel Catholic College	<p>Year 8 Orientation Day at Men of the Trees, Midland, to transplant seedlings and camp out on school football oval overlooking North Kogolup Lake</p> <p>Years 9 and 10 Perth Hills camp, Mundaring: taking part in weeding and maintenance of Perth Hills Centre, Mundaring and surrounds</p> <p>Taking part in the DEC <i>Water is Life</i> exhibit at the 2010 Perth Royal Show</p> <p>Basic Wildfire Awareness camp, Dwellingup</p> <p>Unit reward camp at Mornington PCYC Harvey</p> <p>St John senior first aid</p> <p>Assisting DEC with rehabilitation of particular degraded bushland areas within Beeliar Regional Park, by planting and watering over 300 native tree species</p> <p>Collecting rubbish along Coogee Beach and conducting general clean-up</p> <p>City of Cockburn – environmental officers</p>	<p>Men of the Trees</p> <p>DEC – Perth Hills Centre</p> <p>Royal Agricultural Society, DEC</p> <p>DEC – Fire Management Services Branch</p> <p>Mornington Adventure Camp</p> <p>St John Ambulance WA</p> <p>DEC – Regional Parks Unit</p>

Bush Rangers unit	Activity	Partners
Emmanuel Catholic College (cont'd)	<p>College paper recycling project</p> <p>Collecting rubbish in bushland along Kemp Road, Beeliar</p> <p>Registered Adopt-a-Spot with Keep Australia Beautiful</p> <p>Removing arum lilly in bushland along Branch Circus, Beeliar</p> <p>Bush tucker barbecue for whole school to taste test various native meats and enjoy animal farm</p> <p>Planting native trees (tuart gums) on perimeter of school football oval to control water logging/flooding in winter</p> <p>Monitoring of bushland rehabilitation after fire</p> <p>Weeding and general maintenance of school grounds as well as maintenance of native garden and frog pond</p> <p>Water quality monitoring at South Kogolup Lake, Beeliar Regional Park</p> <p>Maintaining 'turtle tunnels' near South Kogolup Lake and monitoring numbers of dead long neck tortoises</p> <p>Production of vegetable garden and worm farm</p>	<p>Western Recycling</p> <p>Adopt-a-Spot, Keep Australia Beautiful</p> <p>Old Macdonald's Travelling Farm</p>
Esperance Senior High School	<p>Recruit camp – walk trail, observation deck and snorkel trail maintenance on Woody Island</p> <p>Leadership camp – Thomas River</p> <p>Tree planting – Lake Warden catchment area</p> <p>Tree planting – 9 Mile Beach</p> <p>Fourth Beach dune restoration project</p> <p>Clean Up Australia</p> <p>Bird observation – Lake Windabout</p> <p>Rossiter Bay to Lucky Bay Coastal Walk</p>	<p>DEC Esperance</p> <p>DEC Esperance</p> <p>Esperance Regional Forum</p> <p>Shire of Esperance</p> <p>Shire of Esperance</p>
Fitzroy Valley District High School	<p>Fitzroy Valley District High School (FVDHS) programs/initiatives - Recycle/Reuse/Reduce Initiative, garden development and maintenance, hazard identification</p> <p>Kununurra toad busting excursion – assist STTF in toad busting activities in 2010 campaign at Point Springs A Class Nature Reserve, Carlton Hill Station</p> <p>Broome rewards excursion – assist conservation volunteers with flatback turtle monitoring and marine debris at Cable Beach, Broome</p> <p>Giekie Gorge National Park excursions</p> <p><i>Passiflora foetida</i> weeding and control</p> <p>Several activities for Bush Ranger modules</p>	<p>Waste Wise resources, FVDHS staff, Shire of Derby/West Kimberley</p> <p>Stop The Toad Foundation, DEC – Kununurra</p> <p>Conservation Volunteers Australia, Broome Camp School, Chelonia Wildlife Rehabilitation, Tangaroa Blue Ocean Care Society</p> <p>Giekie Gorge National Park, DEC – Fitzroy Crossing</p>

Bush Rangers unit	Activity	Partners
Fitzroy Valley District High School (cont'd)	Job safety analysis tutorials Giekie Gorge familiarisation	
Geographe Education Support Centre	Cape to Cape Track – fundraising for Tenderfoot School Induction camp Work camp Shark Bay reward camp Adventure camp Community garden Peppies for Possums project West Street Reserve Ranger Report Gatekeeper Project Wharncliff Mill Recycling project - brick making and distribution Beach clean-up Keep Australia Beautiful committee and work Interschool cross country Tidy Towns Australia's Biggest Morning Tea Healthy lifestyle activities for primary school students Bike track work at Geographe Primary School	Parents, Tenderfoot School Kenya Ribbons of Blue Newton Moore ESC DEC Newton Moore ESC Community Garden Committee The Possum Group Friends of the West Street Reserve DEC Shire of Busselton Keep Australia Beautiful Keep Australia Beautiful Council Busselton Senior High School Tidy Towns Committee Busselton Senior Citizens Centre Cancer Foundation Geographe Primary School
Jerramungup District High School	Tree planting on local farms Beach cleaning Weeding tea tree from national park Nanga Bush Camp/Dwellingup Adventures First aid certificates Yarrabee revegetation	Bruce Trevaskas Fitzgerald biosphere group Fitzgerald biosphere group St Johns Ambulance Bush Heritage Australia
John Forrest Senior High School	Mundi Biddi Trail – ride from Albany Hwy to Jarrahdale Dryandra – capture, tag and release Beach community service, quadrats, beach restoration programs Bush Wardens	DEC Narrogin Ern Halliday Weld Square Primary School

Bush Rangers unit	Activity	Partners
John Forrest Senior High School (cont'd)	<p>Norah Hughes Park – water testing, macroinvertebrate surveys</p> <p>Eric Singleton Bird Sanctuary – bird surveys, water testing</p> <p>Rocky Pool – John Forrest National Park, flora and park conservation</p> <p>Lightning Swamp – flora survey, transect survey</p> <p>Dwellingup – Fire Awareness Course</p> <p>ANZAC Day parade</p>	<p>DEC Fire Management Services</p> <p>Embleton Age Care</p>
John Septimus Roe Anglican Community School	<p>Community service camp – Yanchep</p> <p>Survival camp – Manual 2 – Mundaring</p> <p>Leadership camp – Manjedal</p> <p>Community service camp – Yanchep</p> <p>Team building camp – Manjedal</p> <p>Community awareness camp – GWN Trek, Perth to Leonora to Perth</p>	<p>DEC</p> <p>Scouts</p> <p>DEC</p> <p>Scouts</p> <p>Kids With Cancer Support Group</p> <p>GWN Trek</p>
Kalbarri District High School	<p>Colour party for the town ANZAC Day parade</p> <p>Official function with DEC and tammar wallaby release</p> <p>Week-long camp at Karijini National Park</p> <p>Dune restoration at Jakes Point</p> <p>Walking track maintenance at Rainbow Valley and Mushroom Rock</p> <p>Echoes clean up and rubbish audit</p> <p>Lucky Bay clean up and rubbish audit</p>	<p>Kalbarri ANZAC association</p> <p>DEC Kalbarri</p> <p>DEC Karijini</p> <p>Kalbarri Boardriders Association</p> <p>DEC Kalbarri</p> <p>Tangaroa Blue Ocean Care Society</p> <p>Tangaroa Blue Ocean Care Society</p>
Katanning Senior High School	<p>Sandalwood seed collecting</p> <p>Drain stencilling</p> <p>Bush survival</p> <p>Wildcare Helpline session</p> <p>Porongurup hike</p> <p>Dryandra camp</p>	<p>DEC</p> <p>Landcare</p> <p>Bush Wisdom</p> <p>DEC</p> <p>DEC</p> <p>DEC</p>

Bush Rangers unit	Activity	Partners
Kolbe Catholic College	<p>Baldivis Children's Forest Project</p> <p>Point Peron Project</p> <p>Beach Project</p> <p>Incursion at school/weekly meeting</p> <p>First aid training</p> <p>Survival skills training (water)</p> <p>Survival skills training (land and fire)</p> <p>Excursion at school/weekly meeting</p> <p>Excursion at school/weekly meeting</p> <p>Camp in March</p> <p>Camp in November</p> <p>Drill training</p> <p>Birdwatching</p>	<p>Baldivis Children's Forest</p> <p>Friends of Point Peron</p> <p>Adopt-a-Beach, Coast Care, Rockingham Foreshore</p> <p>Animal/Wildlife Rescue Experience</p> <p>Cohunu Wildlife Park</p> <p>Marapana Wildlife Park</p> <p>Gloucester Lodge, DEC EcoEducation, Yanche National Park</p> <p>Camp Kelly, Bush Wisdom, Survival Skills, Dwellingup Outdoor Adventures</p>
Kununurra District High School	<p>Biodiversity trip to north Ningbing Range and Zimmerman Range, East Kimberley: monitoring and recording native fauna</p> <p>Three-day canoeing trip from Argyle Dam to Crossing Falls: team building and personal growth</p> <p>Wyndham Crocodile Farm conservation trip: looking at why we farm crocs and environmental conservation</p> <p>Arboretum project at DEC depot, Kununurra: building a walking path and making native tree signs for the community to enjoy</p> <p>The Gibb River Mountain Bike Challenge: team building and personal growth eight-day mountain bike trip on the Gibb River Road in the Kimberley</p> <p>Waterways education at Swim Beach, Kununurra: testing water quality, identifying plants and habitats, identifying, measuring and recording water-based bugs, fish and turtles</p> <p>Introduction to fire in the Kimberley: looking at environmental management</p> <p>Level 1 basic life support: basic first aid course</p>	<p>DEC cane toad program, Science Division</p> <p>MG Ranger Program</p> <p>Tropical Forestry</p> <p>DEC Kununurra</p> <p>Mirima Dawang Woorlab-Gerring – Language and Cultural Centre, Save The Children, Clontarf Football Academy (Kununurra)</p> <p>The University of Western Australia</p> <p>DEC Fire Management, Kimberley</p> <p>St John Ambulance, Kununurra</p>

Bush Rangers unit	Activity	Partners
Leonora District High School	<p>Three-day hike camp around town – 62 kms</p> <p>Calendar project</p> <p>Overnight team working camp</p> <p>Fire safety training</p> <p>Local area clean-ups</p> <p>Carp eradication program</p> <p>Abseiling camp – in planning stage</p> <p>Roadside clean-up for town event</p> <p>Eight-day excursions – bush foods and bush safety</p> <p>Three orienteering activities</p>	<p>Leonora police Community health centre Leonora District High School Braemore Station Clover Downs Station Leonora Shire</p> <p>School</p> <p>School Leonora police</p> <p>Leonora police Leonora shire</p> <p>Leonora police Leonora shire Community members</p> <p>Leonora police School Community members BHP Billeton (Mount Keith)</p> <p>Leonora shire School</p> <p>Leonora police Leonora shire</p> <p>School</p>
Mandurah Senior College	<p>CCVFL endorsed program: monitoring, evaluating and recording flora</p> <p>Primary school and seniors mentoring program</p> <p>Bronze Medallion Award</p> <p>Basic first aid</p> <p>Constructing native garden</p> <p>Noongar education/bush survival</p>	<p>Rio Tinto Earth Assist Conservation Volunteers Australia</p> <p>MSC</p> <p>Mandurah Aquatic and Recreation Centre</p> <p>Surf Lifesaving WA</p> <p>Follow the Dream program</p> <p>DEC and Baldivis Children's Forest</p>
Manjimup District High School	<p>Tidy Towns project</p> <p>Timber Park</p> <p>Manjimup SHS graduation</p> <p>Manjimup SHS ANZAC Day service</p> <p>Shannon Rec Site – weed reduction</p> <p>Camp Term 1: Shannon Rec Site</p> <p>Camp Term 2: Wharnclyffe Ecology Centre</p>	<p>Tidy Towns WA, St Vinnies, Manjimup Shire</p> <p>Manjimup Shire</p> <p>Manjimup SHS graduation committee</p> <p>Manjimup SHS administration</p> <p>DEC Pemberton</p> <p>DEC Busselton</p>

Bush Rangers unit	Activity	Partners
Manjimup District High School (cont'd)	Camp Term 3: Perup Ecology Centre Camp Term 4: Logue Brook Rec Camp Native Plant Propagation Nursery Foresters Glen Rehab Site	DEC Pemberton FPC, Manjimup SHS farm DEC
Meekatharra District High School	Studying birds in the local area Designing bird boxes Designing artwork for the town banners Litter collection around the school Promoting the 3 Rs in the school Collecting cans at school to construct a sculpture Creating art work from recycled materials Overnight camp to local race course Bushwalking using GPS Kalbarri camp	
Mercy College	Camp 1: Camp Wattle Grove Camp 2: Wharncliffe Mill - EcoEducation activities, canoeing up the Margaret River, Calgardup and Giants caves Camp 3: Big River Ranch - Kalbarri Mobile Muster Malaga Fauna Rehabilitation EcoEducation activities	Craig Simons DEC Blackwood, DEC EcoEducation South West Region, Outdoor Discoveries Rick and Kaylene Cartledge Mobile Muster Schools Challenge Kelly DEC EcoEducation Perth Hills Centre
Merredin Senior High School	School revegetation project Endangered spider identification at Tamma Parkland First aid using St John book Native plant education with Wildflower Society	Merredin SHS Wildflower Society
Mount Magnet District High School	School garden Nature garden Bush mechanics	

Bush Rangers unit	Activity	Partners
Mullewa District High School	<p>Conservation garden 1 – outside classrooms</p> <p>Conservation garden 2 – outside library: students investigated school grounds to find an area which was not aesthetically pleasing to redevelop; sampled soil to decide what plants would grow best, and where; drew plans; questioned school-site building manager; investigated plant purchases; researched plant conditions including natural and man-made resources; explored watering systems for plants and installed reticulation systems; evaluated and modified gardens with advice, redeveloped another area instead, in consultation with the school grounds manager; planted seeds (this was largely unsuccessful due to over-caring from over-watering); maintained up-keep of plants and areas; designed logos for their gardens.</p> <p>A showcase of students' Bush Rangers work was presented at the town hall to the local community</p>	<p>Builders working on school site</p> <p>School grounds manager</p>
Mundaring Christian College	<p>Cadet recruit orientation camp</p> <p>Marine studies – marine biodiversity</p> <p>Naturaliste Marine Discovery Centre</p> <p>Rangers white-water rafting camp</p> <p>Senior rangers adventure and leadership camp Rottnest Island</p> <p>Planning, preparation and planting of native plants</p> <p>Planting, seeding and mulching within Black Cockatoo Reserve</p> <p>Orienteering</p> <p>SunSmart Awareness Module</p> <p>Mountain biking – bike care/trails care</p> <p>Recycled Art – Sculpture Competition</p> <p>Nursing home visits – community service projects</p> <p>Eco Superstar Challenge</p> <p>College community projects: kindy buddies with environmental topics, drama projects on bullying, recycling art projects</p> <p>Native area clean-up</p>	<p>DSR – Ern Halliday Rec Centre</p> <p>AQWA – Aquarium of WA</p> <p>Naturaliste Marine Discovery Centre</p> <p>Warriuka Adventure Camping</p> <p>Rottnest Island Authority Education Services</p> <p>Mundaring Shire</p> <p>Friends of the Black Cockatoo Reserve</p> <p>Orienteering WA</p> <p>Cancer Council WA</p> <p>George's Bike Shop</p> <p>Scitech</p> <p>Yallambee Hostel, Mundaring</p> <p>Solar City/Western Power</p> <p>Mundaring Christian College</p> <p>Conservation Volunteers Australia</p>
Newton Moore Senior High School	<p>Beach clean-up, Hastie St</p> <p>Fish research</p> <p>Snorkelling activities</p> <p>Tree planting/weeding</p> <p>Orienteering/Maidens reserve activities</p>	<p>Fisheries</p> <p>Coastal Water Dive</p> <p>City of Bunbury</p>

Bush Rangers unit	Activity	Partners
Newton Moore Senior High School (cont'd)	Rottnest Island camp (beach clean-up/flora and fauna conservation) Leadership overnight camps Survival skills Environmental Centre Work Newton Moore SHS Anzac Day drill Bike safety Senior first aid/Rottnest first aid scenarios Parade RD rubbish collection Rubbish collection The Cut and Tuart walk	Rottnest Island Authority DEC Science Department NMSHS ex-cadets School nurse City of Bunbury City of Bunbury
Northam Senior High School	Tree planting at Kerry Down (Farm in York) Mulching Doortj Koorliny track in Northam Tree planting at Burlong Pool (Northam) Clean-up after Toodyay bushfires Swimming lessons Rubbish collection, Avon River Eleven-day camp to Karijini National Park and Kalbarri Five-day camp to Dwellingup Avon Descent clean-up, overnight stay Painting local Northam Scout Hall Aluminium can recycling	Rory Curtin Peter Weatherly, Waters and Rivers Commission Peter Weatherly Bob Jackson Sabina Dempster (RLSSA) Karijini DEC rangers DARE Adventures Shire of Northam Julie Brown
Onslow School	Warroora Camp – camping, fencing off fragile dune systems, fishing, snorkelling, bush walking, spotlight and trapping feral pests Warroora Station – constructing signs for the station River rubbish excursion – Cleaning up Ashburton River Exmouth Camp – preparing, setting up and hosting (and mentoring) a camp for the primary students as well as activities in Cape Range National Park such as snorkelling, tracking and hiking Coastal management plan – constructing an interpretation centre Orienteering – learning how to use a compass and read a map (this course also included an excursion around town following an orienteering course)	David Wirrpanda Foundation Warroora Station DEC Onslow Shire Chevron

Bush Rangers unit	Activity	Partners
Onslow School (cont'd)	<p>Recreational skipper's ticket – students acquired their skipper's tickets after weeks of study and practice</p> <p>Crabbing excursion – developing boat handling confidence, developing leadership skills and interacting with the environment</p> <p>School garden – managing and maintaining the school organic garden</p> <p>Community garden – building seats for the community</p> <p>Bush craft – making crab nets and camping equipment such as a barbecue plate and grill and tent pegs</p> <p>Cook up – providing lunch for local elders at the community garden (fire pit kebabs and damper)</p>	<p>Leaping Lizards</p> <p>Onslow Shire</p> <p>Home and Community Care</p> <p>Leaping Lizards</p>
Roleystone District High School	<p>Hillside Farm camp, Gosnells (overnight camp)</p> <p>Wildlife Rescue visit</p> <p>Perup Eco Centre (three-day camp)</p> <p>Wharndcliffe Mill, Margaret River EcoEducation (four-day camp)</p> <p>Manual weed removal</p> <p>Care and relocation of native grasstrees</p> <p>Afternoon meeting session (AMS)</p> <p>Dieback Action Learning (AMS)</p> <p>Cultural awareness session (Indigenous tool making)</p> <p>Caring for our environment, surveying human impact on local area (3 x AMS)</p> <p>Local native plant and introduced species</p> <p>Identification Creation of Herbarium (3 x AMS)</p> <p>Stocktaking of cadet equipment</p> <p>Leeuwin II, team building (day sail)</p>	<p>Lyn Wilkinson</p> <p>DEC Manjimup</p> <p>DEC Kirup, DEC EcoEducation South West Region</p> <p>At site, Roleystone DHS</p> <p>Grasstrees Australia</p> <p>At site, Roleystone DHS</p> <p>At site, Roleystone DHS</p> <p>At site, Roleystone DHS</p> <p>At site, Roleystone DHS</p> <p>At site, Roleystone DHS</p> <p>At site, Roleystone DHS</p> <p>At site, Roleystone DHS</p> <p>Leeuwin Ocean Adventures</p>
Rossmoyne Senior High School	<p>Restoration work on Bull Creek behind school</p> <p>Worm incursion</p> <p>Clean Up Schools Day</p> <p>Leadership meeting</p> <p>Weeding at Wireless Hill</p> <p>Dance of Science Fair</p> <p>Maintaining seedlings at Yagan Reserve</p>	<p>The Worm Shed</p> <p>Unit instructors</p> <p>Friends of Wireless Hill</p> <p>SERCUL (South East Regional Centre of Urban Landcare of WA)</p> <p>CRREPA (Canning River Residents' Environmental Protection Assn Inc)</p>

Bush Rangers unit	Activity	Partners
Rossmoyne Senior High School (cont'd)	<p>Weeding at Murdoch University</p> <p>Perth Hills Centre, Mundaring unit camp</p> <p>Perup reward camp</p> <p>Karakamia unit excursion</p> <p>Royal Show unit participation</p> <p>Jurien Bay unit camp</p> <p>Rottnest Island unit camp</p> <p>Piney Lakes Environment Education Centre unit excursion</p> <p>Bush Survival, unit guest speaker</p> <p>Swan Canning River Park Youth Forum</p> <p>Basic first aid for ranger recruits</p>	<p>Murdoch University Environment Department</p> <p>DEC EcoEducation, Perth Hills Centre and Nearer to Nature, Community Service</p> <p>DEC Science Division Manjimup, Melissa Patterson</p> <p>Australian Wildlife Conservancy</p> <p>Royal Agricultural Society and Bush Rangers</p> <p>DEC Jurien Bay and Apex Camp Jurien Bay</p> <p>Rottnest Island Authority</p> <p>City of Melville and Piney Lakes</p> <p>Bush Wisdom Survival</p> <p>Swan River Trust, Ribbons of Blue</p> <p>School nurse</p>
Thornlie Christian College	<p>Rottnest camp: orienteering, Geocatches, photographic report of Rottnest, beachcombing - recognition and identification of plants and sea life</p> <p>Manjedal camp: community service - weeding, monitoring jarrah, team building and problem solving rafting building, navigation using compasses, night stalk - observations and recording of fauna</p> <p>Nanga camp with Dale Christian School cadet unit: community service - planting out jarrah seedlings for Nanga</p> <p>Advanced survival skills, canoeing and rafting, team building activities, hike along Murray River, bush safety and survival skills, snake awareness - handling snakes and snake bite safety</p> <p>Citizen science: monitoring Carnaby's black cockatoo</p> <p>White-striped bats listening project during Conservation Week</p> <p>Climate Watch</p> <p>Working safely in the bush: navigation using compasses and GPS</p> <p>Observing biodiversity around the college</p> <p>Planning meals for camp cooking</p> <p>Radio communication protocol using walkie talkies</p> <p>First aid</p>	<p>Rottnest Island Authority</p> <p>Manjedal Activities Centre</p> <p>Nanga Bush Camp</p> <p>Dwellingup Adventures Bob Cooper Outback Survival</p> <p>UWA Carnaby's black cockatoo study, Birds Australia</p> <p>Unit leader and instructors</p>

Bush Rangers unit	Activity	Partners
Warnbro Community High School	<p>Weeding, planting and maintenance at Point Peron</p> <p>Waterwise Garden</p> <p>Boranup Forest clean-up and track maintenance</p> <p>Cape to Cape Track clean-up, Contos to Point Road</p> <p>Caving ecosystem awareness</p> <p>Woody Island eco-tour and educational stay</p> <p>Cape Le Grande National Park</p> <p>Warnbro Community High School clean-up</p> <p>Beach clean-up, Shoalwater Islands Marine Park</p> <p>First aid training</p>	<p>Naragebup Environmental Centre</p> <p>Naragebup Environmental Centre</p> <p>Dirty Detours Mountain Bike Adventures</p> <p>Warnbro Community High School Outdoor Discoveries</p> <p>Mackenzies Cruises</p> <p>DEC Esperance</p> <p>Warnbro Community High School</p> <p>Warnbro Community High School</p> <p>Warnbro Community High School</p>
Waroona District High School	<p>Raft building/team building activities</p> <p>Chuditch release</p> <p>Basic first aid</p> <p>Nanga Bush Camp</p> <p>Paintballing</p> <p>Activities – fast water tube rafting, canoeing the Murray, giant games, abseil/wall climbing, mountain biking, jarrah jungle gym, rogaining/hiking, night encounters, raft building, posers and predicaments</p> <p>Conservation work – tree planting (Hamel and Dorsett Road)</p> <p>Basic first aid</p> <p>Camp Mornington activities – orienteering, shelter building, raft building, flying fox, high ropes course</p> <p>Woodman Point Camp activities – surf lifesaving, team building, flying fox, abseiling, search and rescue, fishing, beach games, vertical challenges, rock climbing, surf skis, ultimate sports</p> <p>Conservation work</p>	<p>Forrest Edge Recreation Camp</p> <p>Alcoa</p> <p>St John's Ambulance Waroona Sub Centre</p> <p>Nanga Bush Camp, Vineyard Caterers</p> <p>DARE Adventures</p> <p>Dwellingup Adventures</p> <p>LandCare, Greening Australia</p> <p>St John's Ambulance Waroona Sub Centre</p> <p>Camp Mornington</p> <p>Woodman Point Camp, Department of Sport and Recreation, Accolade Catering</p> <p>DEC</p>

Bush Rangers unit	Activity	Partners
Wongutha CAPS	<p>Camp to Woody Island: understanding the importance of islands for conservation, the use of islands as control comparisons, comparing habitats to the mainland</p> <p>Camp to Albany and Margaret River: abseiling in the caves, cave conservation, tingle forest rehabilitation, Tree Top Walk and associated conservation, forest rehabilitation</p> <p>Camp to Bromus Dam: ropes course, archery, spear making and use, team challenges, orienteering, camp cooking, rescue scenarios, snake handling, team work</p> <p>Tree planting on the school farm sites</p> <p>Tree planting on the neighbour's farm</p>	<p>McKenzies Island Cruises</p> <p>DEC Margaret River</p> <p>DEC Esperance</p> <p>Esperance Regional Forum</p> <p>Esperance Regional Forum</p>