

Project Overview

Cascadia Consulting Group, Live Nation, Aramark have teamed together to pilot the recovery and recycling of used beverage containers (UBC) at White River Amphitheatre on Muckleshoot Indian Tribal lands near Auburn, Washington. The pilot program will take place in 2008 during the White River Amphitheatre's summer concert series. The venue serves 10,000 – 12,000 people and the site hosts concerts that represent a wide range of musical styles – from Vincente Fernandez to Ozzfest to KUBE Summer Jam. White River Amphitheatre's concerts attract myriad audiences representing different age groups, socioeconomic strata, and political persuasions. Concert-goers also come equipped with healthy carefree, I-want-to-enjoy-myself attitudes. And although attendees may be familiar with recycling at their residences, a party and have-fun atmosphere does not necessarily translate into vigilant recycling behavior.

We want to change that. To increase recycling at concert events and related venues, The Team proposes to test two different types of UBC recovery programs that combine incentives (in the form of free concert tickets) for volunteers and involvement from both volunteers and concert goers. The objective of this pilot project is to create a replicable program that concert venues throughout Washington State (and beyond) can use to successfully recover used beverage containers – including glass, plastic bottles, and aluminum cans. The results of this effort will include a comprehensive toolkit that provides facility managers with easy-to-use steps for setting up UBC recycling programs, a curriculum for training volunteers, and samples of the promotional materials, signage, and informational sheets distributed for the pilot.

Project Work Plan

The UBC pilot project is being developed and implemented by a coalition that includes Cascadia Consulting Group (providing education and recycling implementation expertise), Live Nation (sponsoring the concert pilot), and Aramark (managing concession operations at the site). All of these partners will contribute staff time for the pilot. Coca-Cola will help sponsor recycling initiatives. In addition, Live Nation is in conversation with Verizon to help promote recycling during the concerts; Live Nation and Cascadia will continue to approach the Muckleshoot Indian Tribe as a volunteer recruitment partner; and Waste Management will likely provide additional recycling containers needed for the pilot program.

- White River Amphitheatre's General Manager, Molly Zidow, has secured the support of Coca-Cola from Account Manager Todd Walden at the Coca-Cola Tacoma Sales Center. Coke would like to sponsor incentives for customers during White River's 2007 concert season.
- Molly is also in conversation with Verizon to advertise recycling on their large video screens in between concert acts at White River.
- Cascadia has approached Waste Management and has received positive interest in supporting White River's recycling program through donated recycling totes.

Depending on the artist and concert, Live Nation and Aramark host "pour" and "non-pour" events. At the pour events, vendors pour out drinks into plastic cups; at the non-pour events, attendees receive their beverage in the original bottle. Only the beer garden areas serve beverages in glass bottles, in other areas plastics bottles or aluminum cans (or plastic cups) are distributed. In general, White River Amphitheatre concerts are split evenly between pour and non-pour events. Regardless of the type of event, Aramark contracts with not-for-profit organizations to serve food and drinks to concert-goers. The organizations

volunteer their time, in exchange for a share of the proceeds generated from the snack and beverage sales.

Target Audience: For our UBC collection pilot, we propose to work closely with Aramark's group of volunteers as well as recruit others. Aramark and Live Nation will promote the volunteer recycling opportunity on the concert venue website. Ideally, the Muckleshoot Job Corps program will also assist in volunteer recruitment. In addition, King County Master Recycler Composter volunteers may be recruited for White River concerts.

We intend to train volunteers on how to optimize UBC recycling at both pour and non-pour events, and track and measure the quantity of containers recovered. At pour events, the volunteers themselves will be primarily responsible for collecting UBCs; at non-pour events, the volunteers will staff waste collection stations and work with the concert-goers to collect containers. At both types of events each volunteer will receive a "working pass" (i.e., a concert ticket to the venue), a \$35.00 value.

For each event, we will train the cadre of volunteers. At pour events, volunteers will work at vendor-stations to help collect the UBCs. At non-pour events recycling volunteers will staff the recycling/garbage collection stations throughout the facility to help concert-goers place recyclables and waste materials into appropriate bins. The Cascadia Team will create and produce signs that are placed at each waste/recycling collection station and volunteers will wear distinctively colored t-shirts identifying them easily as "recyclers."

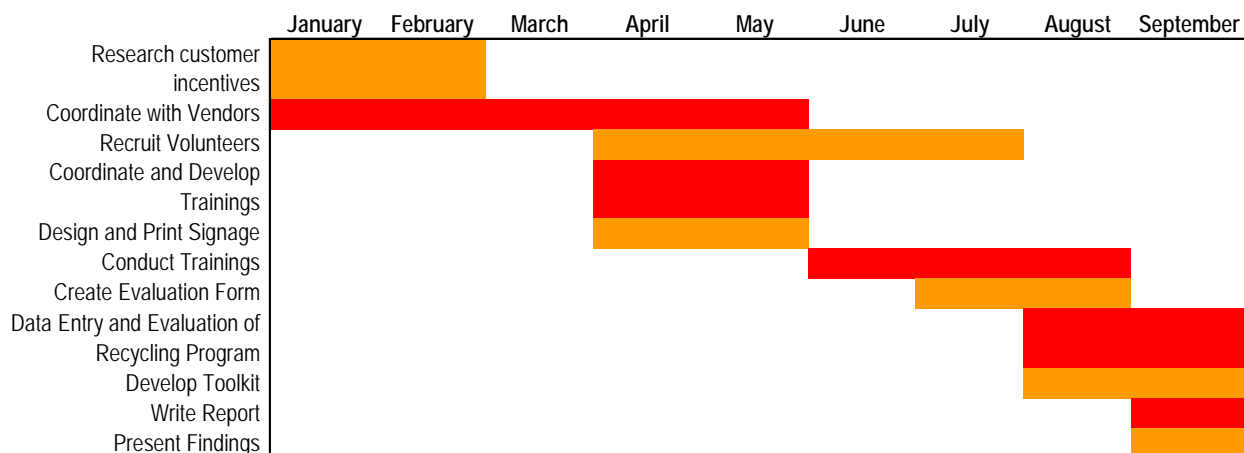
Incentives for the volunteers include receiving a "working pass" to get into the concert for free. In addition, Cascadia will coordinate with Aramark's standing volunteer efforts recruiting non-profit organizations to staff concession stands. For this volunteer work, non-profits receive a portion of the concert's concession sales. We suggest recruiting a larger pool from each non-profit to help cover the recycling volunteers. The incentive is then not only free concert access, but also a portion of the night's concession sales for their organization.

To provide effective customer incentives, we propose researching successful programs at concert venues worldwide. By utilizing Live Nations and Coca-Cola contacts, we could start with a short list of venues in Japan, Australia, New Zealand, and Europe to learn from any existing or attempted customer incentive recycling programs.

Customers will benefit from recycling their own containers via one of the following proposed incentives:

1. During non-pour events, customers can return 5 empty beverage containers in exchange for one free full beverage.
2. Customers receive a voucher with a website address for each empty beverage container they return. After the concert they can visit the website and enter to win either a free ticket to a White River concert or free Coca-Cola paraphernalia.
3. Customers can return 5 empty beverage containers in exchange for a free donated item, such as a Coca-Cola T-shirt or reusable mug.
4. Other incentives as discovered via research.

The following timeline provides a detailed outline of the important dates and key milestones we have set to ensure that we successfully implement and evaluate our UBC pilot program.



Program Evaluation/M Measurement

Through this UBC pilot we intend the following outcomes: (1) we plan to achieve a 50% - 70% recovery rate of UBCs from both the pour and non-pour concert events; (2) we will establish recommended “predictors” such as the ideal number of recycling collection containers needed per people or volume of beverages served; and (3) the number of volunteers needed to staff pour versus non-pour events.

Currently, the White River Amphitheatre has within its arena 100, 55-gallon garbage cans that go to a 30-yard compactor, and 35, 64-gallon recycling collection containers that feed into a 20-yard roll-off container for recyclables. The 20-yard container, however, is often too contaminated to count towards recycling and instead its contents are thrown into the garbage. (In 2006, the Amphitheatre recycled none of its UBC waste.) Contamination results, in part, from the difficulty emptying un-bagged UBCs into the roll-off container. Program improvements will include ramp access to the roll-off that will ease emptying for volunteers and clean up staff.

Our evaluation plan includes the following elements:

- 1) To verify that we achieve a 50- 70% recovery rate, Cascadia will conduct a visual waste characterization analysis of the waste containers to determine how successfully recycling occurred at each event. For more information regarding Cascadia’s visual waste characterization analysis, please refer to the Appendices.
- 2) In addition to verifying the amount of UBCs recovered, The Cascadia Team will record anecdotal information about recycling activities at each event. At least one volunteer (per event) will gather general feedback about the concert-goers regarding age and gender (i.e., under 30 or over 30 years old; male or female) and their general awareness and use of the recycling services on-site. We will compare this anecdotal info to the demographic data Live Nation and its concert promoters use to target their audiences. This information will help us better characterize the audience at each event and will likely help determine the “predictors” that ensure that UBC recycling succeeds at other similar large-scale events.
- 3) We will also track the number of recycling volunteers trained at pour vs. non-pour events, how audience and vendor participation differs between event-types, and volunteer hours worked.

Project Outputs

The **comprehensive toolkit** will provide facility managers with easy-to-replicate steps for setting up a UBC recycling program at similar types of large-scale events and concert series. We envision a folder with

multiple fact sheets that list our “predictors” (i.e., how many recycling collection containers/event type or attendees; ideal number of volunteers needed to staff an event, etc.). The folder will also contain a **training outline** and **talking points** for training event volunteers and **tracking forms** for monitoring results. Copies of the **signs** we create for the collection stations will be included in the packet as well as any **promotional materials** we create to recruit volunteers.

After the grant runs out, this program can be continued in future years both at White River and at other venues throughout Washington State. We strongly believe that a “train the trainer” approach by educating volunteers to educate concert-goers is integral to the success of all recycling programs. While we recognize that grant funding will not be available for White River in future years, nor for venues throughout the state, nearly all outdoor concert venues already incorporate the use of volunteers to support their programs. With the help of the “best practices” toolkit, White River and other venues should be able to successfully incorporate the recycling-specific training into any existing volunteer training. In addition, we anticipate that there may be a certain number of repeat volunteers from concert to concert and/or year to year, helping to provide recycling program consistency.

To replicate the success of this program, venues will need the following:

1. A cadre of volunteers. Most outdoor venues already incorporate coordinating volunteers as part of their event planning.
2. Training of volunteers and custodial staff before events.
3. Sponsorship from vendors. In the case of White River Amphitheatre, Coca-Cola is a current sponsor/partner. Due to both national efforts and a new Washington State law requiring vendors to pay for the “take-back” of their empty containers, vendors such as Coke should be more than willing to participate. Additionally, local hauler support should be secured. Haulers will want to support the transportation and recycling of the collected materials to make certain recycling goes smoothly as possible and that they receive as many cleanly sorted recyclables as possible.
4. Promote recycling before and during the event. Let concert-goers know about recycling at the event when they buy their ticket, on the venue website, and/or through pre-concert email blasts. At the event, make stage announcements before and in between acts, and utilize any video screens. Finally, advertise recycling of beverage containers at the points of purchase.
5. Venue managerial support. At White River Amphitheatre, General Manager (GM) Molly Zidow’s support guarantees that vendors comply with venue initiatives. The GM knows how to work creatively with the vendor partners to ensure success.

Budget

	Project Activity	Responsible Partner	In-Kind/Project Funded	Initiative Funding Needed
	Research Customer Incentives	Cascadia		\$1,500
	Provide 30 more recycling totes	Waste Management	\$1,200	
	Pay for WM recycling service	Live Nation	(\$92 per ton)	
	Ramp rental	Cascadia		\$2,000
	Recruit Volunteers for 6 concerts on Live Nation website	Aramark	\$750	
	Provide coordination assistance for volunteer trainings	Aramark	\$500	
	Provide coordination assistance for volunteer trainings	Live Nation	\$800	
	Coordination meetings	Cascadia		\$3,500
	Develop volunteer trainings: outline what can and cannot be recycled, how to encourage guests to recycle, and how to fill out evaluation form	Cascadia		\$2,500
	Purchase 120 volunteer T-shirts	Cascadia		\$1,200
	Design, print, and laminate signage	Cascadia		\$3,000
	Conduct 6 Trainings, one before each of the 6 concerts	Cascadia		\$6,400
	Incentives for the volunteers include all access passes	Live Nation	\$4,200	
	Create evaluation form for volunteers to complete			\$800
	Volunteers educate concert guests about in which container to put their beverage containers	Volunteers	\$16,200	
	Evaluate whether the use of volunteers increased recycling at venue including gathering visual waste characterization	Cascadia		\$5,000
	Data entry of evaluation forms	Cascadia		\$600
	Write up evaluation report	Cascadia		\$1,500
	Develop toolkit	Cascadia		\$2,500
	Developing a presentation and sharing findings at September 2008 board meeting	Cascadia		\$1,000
	Total:		\$23,650	\$31,500

Project Deliverables

1. Final Report to include:
 - a. # and type of beverage containers sold at each event and the number recovered both by number and percentage and totals for the study.
 - b. Number of volunteers at each event and total for the study.
 - c. Type of incentive(s) offered at each event, # of incentives distributed, if applicable, and the number redeemed, by number and percentage of the total distributed. Provide the same data for the study period.
 - d. Weight or volume of aluminum and plastic collected at each event and totals for the study period.
 - e. Garbage disposed -
 - i. Volume generated at each event and percentage reduction from control event(s).
 - ii. Total volume generated during the study period and % reduction from control event(s).
 - f. Anecdotal information that might affect traffic at the event and thus usage of the recycling facilities and incentives: These may include but are not limited to:
 - i. Age range or average age of audience,
 - ii. seating arrangements,
 - iii. intermission or not,

- iv. pour vs. non-pour,
- v. # of volunteers, etc.
- g. Summary of any consumer research surveys and summary of the study from the survey perspective.
- h. Suggestions for improvements to the project design or implementation for future users.
- i. A simple guide to implementing the program from scratch at another location.
- j. Final Budget
- k. Project toolkit
 - i. The **comprehensive toolkit** will provide facility managers with easy-to-replicate steps for setting up a UBC recycling program at similar types of large-scale events and concert series. We envision a folder with multiple fact sheets that list our “predictors” (i.e., how many recycling collection containers/event type or attendees; ideal number of volunteers needed to staff an event, etc.). The folder will also contain a **training outline** and **talking points** for training event volunteers and **tracking forms** for monitoring results. Copies of the **signs** we create for the collection stations will be included in the packet as well as any **promotional materials** we create to recruit volunteers.

APPENDICES

Project Partners

Cascadia Consulting Group, Inc. provides a wide range of services to public and private sector clients, helping them design, implement, and evaluate programs that minimize waste and conserve resources. The company often implements large-scale education events and is well-versed in managing volunteers. In fact, since 1996, Cascadia has led the training and volunteer coordination efforts for King County's Master Recycler Composter (MRC) program. It has also been involved in similar volunteer programs for Snohomish and Whatcom counties and the City of Seattle. Volunteers learn about solid waste systems, recycling opportunities and markets, waste prevention and resource conservation and **Katie Atkins**, Senior Associate, has served as lead trainer since 1999. **Shaina Gates**, MRC Volunteer Coordinator will assist in on-site efforts. In addition to its education programs, Cascadia conducts waste characterization studies for municipalities throughout the USA. And the company is often called on to develop surveys, analyze data and evaluate a program's effectiveness.

Live Nation is the world's largest promoter of live concerts, specialized motor sports, and other live entertainment events. Live Nation promoted 26,000 events in 2006. Live Nation owns and operates White River Amphitheater. **Molly Zidow**, General Manager, will provide working passes for volunteer recyclers, as well as assist in the coordination and implementation of White River's beverage container recycling program.

Aramark provides beverage service including soft drinks, bottled water, beer and wine for events at White River Amphitheater. Aramark offers fundraising opportunities for not-for-profit organizations at each event. Volunteers provide beverage services and receive a share of the proceeds for their organization. Grant Warner, Director of Operations for Aramark, will assist with the recruitment and coordination of volunteers, as well as with the organization of volunteer training for the beverage container recycling program.

Waste Management, Inc. provides waste and recycling containers, collection and hauling services throughout Washington State. For White River Amphitheater, Waste Management currently provides collection services for garbage and cardboard / paper recycling. Waste Management also provides totes and a dumpster for glass, plastic and aluminum beverage containers although these materials have not been sorted and stored sufficiently for recycling to date.

The Muckleshoot Indian Tribe is one of Washington State's larger Tribes, with an on- or near-reservation population of approximately 3,300. The Muckleshoot Job Corps program could be actively involved in additional volunteer recruitment for the White River beverage container recycling program.

Visual Waste Characterization Analysis

Cascadia Consulting Group grew out of the solid waste industry, having directed Washington State's Best Management Practices Analysis for Solid Waste in 1988. Since that time, we have performed waste audits from New York City to Honolulu and many points in between. Our experience has shown that effective solid waste planning and service delivery relies on an understanding of the waste stream – how much of each type of material is generated and where it comes from. The information provided by a waste audit is often essential to developing waste management policies, implementing recycling programs, and ultimately, saving money.

To ensure the accuracy of our proposed pilot to recover UBCs from concert events and create a program that is replicable, Cascadia will use its visual waste characterization analysis technique. Cascadia has developed proprietary data collection software for the Toughbook™ portable computer to record and verify visually characterized waste. An example screen shot of the software tool is shown at right. Our computerized data collection method calibrates the composition percent estimates for each sample of waste.

Check if Material is Present	Estimated % of Total Volume	Calculated Weight	Number of Items	Calculated By Count	Actual Weight	Scaled Weight
<input checked="" type="checkbox"/>	5	4.62	0	0.00	0.00	6.07
<input checked="" type="checkbox"/>	0	0.00	0	0.00	0.70	0.00
<input checked="" type="checkbox"/>	92	37.10	0	0.00	0.00	48.68
<input type="checkbox"/>	0	0.00	0	0.00	0.00	0.00
<input checked="" type="checkbox"/>	3	1.21	0	0.00	0.00	1.58

Total % calc lbs lbs by count actual lbs scaled lbs
Paper Subclasses: 100% 42.93 0.00 0.7 56.34

Combined (est. & actual) weight of Paper Subclasses: 43.63 lbs

The visual waste characterization process involves five main steps:

- Step 1:** Measure sample volume. The estimators use a tape measure to record the length, width and height of the sample.
- Step 2:** Note which materials are present. The visual estimators spread out a sample of waste and indicate which materials are present. In this case, an example material is glass containers.
- Step 3:** Estimate composition by volume for each material class (such as UBCs). Beginning with the largest material class present by volume, the visual estimators estimate the volumetric percentage of this material class. This process is repeated for the next most common material class, and so forth, until the volume percentage of every material class is estimated.
- Step 4:** Estimate composition by volume for each material present in the sample. The visual estimators consider each material class separately and allocate percentages to each material present in the sampled waste. In other words, estimators will determine the volume of glass to plastic bottles to aluminum cans, etc.
- Step 5:** Check and reconcile percentage data. The visual estimators then make sure the percentage estimates for the material classes add to 100 percent, and the materials within each material class add to 100 percent.



Katie Atkins

Senior Associate

CASCADIA

Katie Atkins, Associate, has over twelve years experience training businesses, property managers, community members, volunteers, and students of all ages. Throughout the Northwest Katie is known for her dynamic and engaging presentation style with an emphasis on interactive activities. Katie is well received by the business community and King County residents alike.

Katie excels in educating residents about what can and cannot be recycled and why, specifically encouraging the recycling of used beverage containers when outside the home. Katie specializes in conducting waste audits, recruiting and providing technical assistance to businesses and schools, and providing "train the trainer" sessions for volunteers and community organizations.

Katie's experience includes numerous speaking engagements: she developed and presented composting workshops as part of the 2003 Sammamish Plateau Water & Sewer District *WaterWise* workshop series, the 2002 Northwest Flower and Garden Show, and the 2001 Seattle Home Show 2; she has also presented at the 2004 and 2001 Environmental Educator's Association of Washington (EEAW), and 2007, 2005 and 2002 Washington State Recycling Association (WSRA) annual conferences.

Education

Master of Science, Arts Management,
University of Oregon
Bachelor of Arts, Comparative Literature;
Certificate of Environmental

Selected Experience

King County Recycling Education Campaign, King County 2006-2007

Conducts recycling trainings to large businesses such as Home Depot and Wal-Mart. Trained staff to conduct recycling audits and provide technical assistance to property managers of multi-family housing. Researched and assembled pertinent materials for the *Garbologist* media event to promote recycling in King County.

Commercial Sector Outreach Program, Seattle Public Utilities 2006-2007

Provides outreach, education, and technical assistance to Seattle businesses and property managers to help those businesses conserve resources, reduce or prevent pollution, and become more sustainable.

Master Recycler Composter (MRC), King County 1998-2007

Project Manager and Lead Trainer for the King County MRC program. Coordinated all aspects of the 1999-2007 King County annual MRC trainings and 2001, 2005, and 2006 Advanced Trainings. Trainings focus on waste prevention and recycling through composting, natural yard care, green building, and household hazardous waste. Develops training curriculum and props. Works directly with volunteers, coordinates outreach events, and tracks activities. In 2004 created and taught mini-MRC training for King County Customer Service staff.

Adjunct Faculty, Seattle Pacific University (SPU) 2003-2007

Offered King County MRC training for credit through SPU.

Northwest Energy Efficiency Alliance (NEEA), 2006-2007
Develops training and coordinates training details to ensure NEEA staff and over 100 NEEA consultants provide consistent messaging and assistance to their constituents in Washington, Oregon, Idaho, and Montana.

Green Gardening Program, Seattle Public Utilities 2004-2007
Develops and presents trainings to nursery staff on lawn and garden pesticide reduction strategies; conducts interactive presentations to community organizations and garden clubs; and trains Green Gardening volunteers to give presentations.

EcoDeals.org, King County 2006

Recruited partners such as REI, The Green Car Company, Bi-O-Kleen, and The Paper Zone to showcase their products and services that deliver outstanding performance, conserve resources, and provide real cost savings to King County consumers.

Studies, Indiana University

Volunteer

Washington State Recycling Association
Washington Backyard Composting
Conference
Passages Northwest - Puget Sound

**School Audits, Snohomish County Solid Waste Management Division
2000-2006**

Presents recycling information to elementary through high school classes and clubs, faculty and custodial staff meetings. Provides technical assistance to school district maintenance staff, teachers, custodians and students. Presented a "tool-box" session on how to conduct school waste audits at the 2002 WSRA conference.

**Northwest Natural Yard Days (Grasscycling), King County Solid
Waste Division 1999-2004**

In 2004, trained retail store garden staff on natural yard care techniques to share with customers during a two-month NNYD sales event.

MOLLY ZIDOW, White River Amphitheatre

General Manager, Auburn, WA-Nov 2006-Present

Operations Manager, Auburn, WA-Mar 2003-Present

Operations Manager, Alltel Pavilion-Raleigh, NC-Aug 2000-Feb 2003

Responsible for all aspects of facility and event operations for venue including waste management, UBC and other recycling. Coordinate a multitude of projects, personnel and vendors to ensure safe and efficient operations. Creates and implements operations policies including: venue regulations and security procedures, parking and traffic plans, employee training manuals, emergency guidelines and more. Responsible for accurate forecasting and outcome of venue overhead budget, as well as individual event budgets and capital projects. Liaison with area officials and tribal representatives regarding the impacts of the venue on the surrounding areas. Responsible for handling all Risk Management issues for venue. Responsible for the training and care of employees to ensure the highest level of customer service possible for all patrons of the venue.

Public Affairs Manager: Alltel Pavilion-Raleigh, NC-June 1999-August 2000

Coordinated all charitable activities of the venue including the most successful charity auction to date that raised \$10,000 for a local non-profit that provides free music lessons to low-income children. Handled non-profit venue rentals including all license agreements and insurance certificates. Acted as lead venue representative to all community and civic groups. Organized the first Alltel Pavilion *Community Leadership Committee* formed to promote the community efforts of the venue.

Operations Assistant: Alltel Pavilion-Raleigh, NC-August 1998-November 1998

Responsible for the hiring, training, scheduling and payroll for over 300 seasonal employees. Managed all event related reports. Assisted all Departments with the coordination of all on-site activities on event days.

Box Office Assistant: Alltel Pavilion-Raleigh, NC-May 1998-July 1998

Proficient in Ticketmaster ticketing system. Responsible for all in-house ticket orders for the Sales and Marketing Departments. Managed seasonal Box Office staff on event days.

Other Work Experience

Consultant: Work Place Options-Raleigh, NC-January 1999-May 1999

Successfully prepared childcare referrals as requested by contractors. Utilized strong communication and organizational skills to meet daily goals.

Teacher: Guadalupe Head Start-Milwaukee, WI-August 1993-July 1996

Promoted to lead teacher within six months of start date. Responsible planning and implementing all classroom activities.

Education

MEd. Social & Comparative Analysis in Education: University of Pittsburgh-1998

B.A. Political Science: Arizona State University-1993