



UVa Sustainability Guide

Team Greenformation: Team 1

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PRECEDENT ANALYSIS

Abstract

Our workshop was given the task of developing a comprehensive sustainability guide for University students. Our team had the specific job of researching initiatives at other universities that had been successful in promoting sustainability. The goals of this research were to choose programs that were new to UVa and have had tangible results at other universities similar to UVa.

We identified schools that were similar to UVa in size and demographic and also schools that have been lauded for their sustainability efforts. This double-sided approach was to ensure that we could pick programs that had tangible results as well as programs that would be well-suited to this student body. We contacted a number of sustainability coordinators to ask questions about their own initiatives and sustainability guides. We then performed research on events held at other schools, opportunities available to their students, and ways in which the schools integrated sustainability efforts into the community. We compiled all of our data and identified the methods that were successful across the board.

First, our group found that the most successful format for disseminating information was online through email and social media. Secondly, we determined that students respond best to small amounts of clear information. We also found that breaking information up into categories (for example, recycling, water conservation, etc.) allowed students to best absorb the information. UC Berkeley highlighted a best practice of separating these categories by color-coding them on their website; this seemed to make information even more accessible. Our next finding was that schools that provided information on local sustainable businesses made the information more applicable to their daily lives. Using these findings, we suggested that the guide be sent through an email format and that information should be provided as “how-to” guides that would be broken into specific categories with information on education opportunities, sustainable living tips, and local sustainable businesses.

We presented these findings in our workshop and combined information with the other teams. The marketing team’s research validated that email formats are most successful at UVa and Team Five’s tabling efforts proved that categories were a helpful way for students to think about sustainability as a whole. Team five was also able to inform the workshop on which categories were most important to UVa students.

Our final product was a list of easy, how-to tips compiled in a color-coded categorized document. We are collaborating with SustainaUnity to send the tips out in a weekly email to students via their newsletter.

INTRODUCTION

Background: UVA has a wide range of sustainability-related activities and groups

Sustainability at UVA largely began in 2002 with the development of the Conservation Advocates program. This group appoints one person in each dorm who encourages energy conservation and educates students on conservation methods. In 2008, the President’s Committee on Sustainability was established in an effort to place the sustainability mission as one of the University’s top priorities. Today, university students have a plethora of opportunities to get involved, including:

- Over 50 organizations related to sustainability including the Student Council Sustainability committee, UVa Community Garden, Greek Recycling, Student Entrepreneurs for Economic Development, and Environmental Sciences Organization
- Sustainability kiosks which allow students to see how much water and electricity buildings use on-grounds
- The SustainaUnity newsletter which informs students about environmental and community service opportunities, education opportunities, etc.
- A “Green Guide” given to first year students in dorms that offers ways to reduce energy and water usage
- Green challenges such as “Track your Trash” which gives students an opportunity to see how much garbage they produce in a week
- In 2011, the Global Sustainability minor was approved. Sustainability-related majors include Environmental Science, Environmental Thought and Practice, and Global Development studies
- The “Sustainability Resolution” which laid out a carbon reduction plan. The University hopes to reduce its carbon footprint by 25% by 2025

Problem: Information overload and lack of direct engagement overwhelms students

As sustainability activities at UVa continue to flourish, students have a wonderful opportunity to either get a taste of sustainability related activities and issues or to completely immerse themselves in the sustainability movement. Despite this opportunity, we have identified two problems that might prevent students from getting involved with sustainable living and the sustainability community:

- **Information overload:** Many students get lost in the overflow of pamphlets, posters, lectures, and student groups devoted to advocating sustainability. Students who are not devoted to being environmentally conscientious often get lost in the overflow of information. Because there is no single comprehensive, organized guide, it is easy to become desensitized to these ideas and initiatives.
- **Lack of direct engagement to community at large:** In the *2011 UVa Sustainability Assessment*, student leader Sheffield Hale reports that “While sustainability student groups have more than doubled since 2008, students are still looking for more engagement today that will better prepare them for the world tomorrow.” Students who are not involved in the sustainability community have few “touch points” to learn about green living. The forms of engagement available, such as UVa’s sustainability website, aren’t engaging as they solely provide information without providing an opportunity to absorb oneself in sustainability activities and truly learn opportunities to change one’s lifestyle and get involved.

Stakeholder analysis

Andrew Greene, the sustainability planner in the Office of the Architect at UVa and our community sponsor, has been instrumental in promoting sustainability at UVA. He hopes that UVA can solve its aforementioned engagement issues by creating a comprehensive sustainability guide. This guide will organize all of the sustainability related information as it is useful to students and will also actively engage students with topics that interest them.

The sustainability guide should have positive externalities for many other stakeholders, including the following:

- Students: Benefit through resolution of the aforementioned needs

- Administration: Marketing opportunity for incoming students; healthier university as lifestyle patterns of community changes; opportunity through cost cutting as consumption becomes more efficient (through lifestyle changes)
- Professors: Increased interest in sustainability related courses benefits professors in related fields; more help from students in research and sustainability projects
- Local businesses: Green businesses will benefit if students are connected with them through the sustainability guide
- Surrounding community: Will enjoy a healthier environment because of sustainability practices of university
- Other college campuses: Can adopt sustainability guide to better stakeholders surrounding their own campuses

Our team's Role: Our role was to find programs other universities had implemented that successfully promoted sustainability. We researched whether or not schools had a sustainability guide, what content the guides included, and how the information was disseminated to students.

The ideas we found through this research allowed us to create the most successful guide for UVa. While other groups in the workshop sought to answer which issues most concern UVa students and how UVa students can best be reached, we searched for practices that were common at more sustainable universities and for new, interesting ideas that had been successful at schools with similar demographics.

RESEARCH METHODOLOGY

We determined it would be most effective to research both universities with a reputation for being sustainable and universities that were similar demographically to UVa. Performing this analysis involved a few necessary steps:

1. Clarify research topics
2. Brainstorm approaches to collect information and select best approach through use of a selection matrix
3. Create list of target schools, divvy up list among group members, and collect data
4. Tabulate results and come to conclusions on best practices (discussed in findings section)

Step One: Clarify research topics

We decided to first translate the three key questions of our Precedent Analysis (stated above) into research topics. Doing this allowed us to figure out exactly what we would be looking for in researching other school's sustainability guide development efforts.

We performed a preliminary scan of other school's sustainability guides and then brainstormed which topics should be the focus of our research. The following topics were the center of our analysis:

- Guide existence: Does the target school have a sustainability guide?
- Content: Which issues do the other guides choose to focus on? Note that other groups in our workshop will also answer this question through surveying UVa students
- Engagement: In what ways do other universities' guides actively engage students (e.g. give green tips, links to relevant news)?
- Distribution: What form does the guide take (e.g. website, paper, smart phone app)?

- Evaluation: How successful were these guides at reaching students and changing behaviors?

Step Two: Create list of approaches to research and select optimal research strategy

In addition to clarifying our research topics, we also brainstormed a few methods to answer our research topics for each school:

- Speak with administrators at target schools
- Talk to sustainability student leaders at target schools
- Search websites of target schools
- Search schools internal evaluations of sustainability to find information on existence of guide
- Use AASHE’s library of campus sustainable living guides

A few issues are involved in choosing a research approach. The first issue is that certain research techniques provide answers to different research topics. The following matrix highlights thoroughness of the various research techniques:

In summary, our concern with any online searches was that we might miss any paper guides or “sustainability tours” in which students are introduced to sustainability initiatives and businesses through a

Figure 1: Thoroughness of research techniques

	Weight	Call administrators	Speak with other student leaders	Search website	Internal evaluations	Secondary resources
Guide existence	4	5	4	3	1	2**
Content	3	5	5	5	5	5
Engagement	5	5	5	4	3	4
Distribution	4	5	5	1	2	1
Evaluation of success*	2	5	4	2	4	1
Thoroughness score	-	90	84	55	50	41

* Weighted less because of impossibility of thoroughness despite usefulness

** Information missing for a lot of our target schools (i.e. schools similar to our own)

walking tour.

In addition to the question of thoroughness, there were various other decisions associated with choosing a research strategy. We developed the following selection matrix:

Figure 2: Comprehensive selection matrix

	Weight	Call administrators	Speak with other student leaders	Search website	Internal evaluations	Secondary resources
Thoroughness score	3	5	5	3	3	2
Speed of execution	1	2	3	5	3	5
Possibility of success/response	2	2	4	5	3	4
Total	-	21	26	24	18	19

From seeing the results of the selection matrix, it became clear that speaking with student leaders and searching websites would be the most efficient and comprehensive ways to get the desired information. However, we were not limited to one particular research technique, so we developed the following plan:

- 1) Contact student leaders at target schools to ask them about sustainability guides
- 2a) If we do not receive a response, check online for any sustainability guides (through Google searches)
- 2b) Check on AASHE's "Campus Sustainable Living Guide" page to see if site lists target school's guide

Note that we used a few resources to contact student leaders. In addition to personal connections, which were most effective, we connected to students through the "International Campus Sustainable Network" and the "GreenPeace Student Network Team."

Step Three: Create list of target schools and collect data

After identifying our main goals and specific topics for research, we chose target schools with a few careful considerations. We wanted to research schools similar in size, prestige, and passion for sustainability (as judged from our collective preliminary knowledge and by seeing LEED certifications). We felt it was important to choose schools similar in size and demographic to ensure that we could reach the number and type of students here. We also looked at schools that have been recognized for their sustainability initiatives because it is clear that they have found successful ways to promote sustainability. We came up with the following target schools:

- Yale
- Cornell
- Berkeley
- Georgetown
- UNC
- U Illinois
- Michigan
- Wisconsin
- Brown
- Florida
- USC
- George Mason
- UC San Diego
- Wake Forest
- Duke

We also reached out to personal contacts at a handful of other schools and received responses from administrators and student leaders from Northwestern, University of Cincinnati, University of Pennsylvania, and Penn State. In total, **19 schools were in our sample.**

Please see **Exhibit 1** for a copy of the e-mail sent to students and see **Exhibit 2** for a collection of responses from student leaders.

RESULTS: We compiled the responses from the sustainability coordinators we contacted, the guides we found on various school websites, and the programs and events that had been successful. We found several engagement initiatives that appeared to be particularly attractive

Of the 19 schools that we researched, 11 have had successful sustainability guides. Please see Exhibit 3 for a comprehensive tabulation of the content, engagement tools, and distribution of the 11 schools that have sustainability guides.

In our conceptual design, we discussed presenting the information in terms of a stoplight diagram in which we rank ideas by viability and innovativeness. However, we believe that we can sufficiently describe the results by highlighting a few of the common and most attractive findings below (in addition to **Exhibit 3**).

Common practices

From tabulating features of the sustainability guides, the following engagement activities tend to be included in the sustainability guides:

- Task forces and ways to get involved
- Live events (in the frequently updated guides)
- Green living tips
- Links to sustainability news
- Connections to green businesses

The following were the most popular channels of reaching students:

- Websites
- E-newsletters
- Strong social media presence (discussed below)

Best Practices

In addition to common practices, a few best practices emerged. Below, we highlight four best practices and schools who are excelling in them.

Community/business outreach

UC Berkeley's "My Little Green Book" has a list of green businesses, a map of where to find them, and a food map highlighting green markets and eateries.

UC San Diego is particularly successful in linking students to local businesses, and if we consider pursuing this path, we should further work with UC San Diego to adopt best practices.

Michigan's guide, "How to Be a Green Wolverine," was graphically pleasing, concise, and geared toward students with sections like "How to Throw a Sustainable Party!" It also really connects into local businesses offering local places to buy a bike, sustainable restaurants, shops, and recreational activities in the area.

Green tips

George Mason University has a series called "Green Tip of the Week." Each week, a new tip for "living green" is put on their website; it shows up on the home page but also on the side of every linked page. They are simple things that students can put into practice in their daily lives. They also have a "Sustainability Spotlight of the Month" that applauds a student or group for some project or initiative that was environmentally-focused.

UC Berkeley created different cartoon robots that would represent various aspects of sustainability (e.g. "Hydrobot" for water conservation). Each character periodically displays various conservation tips pertinent to college students on the website.

Social media presence

In order to effectively reach students, all successful schools have a blog, Facebook page, twitter feed with frequent updates, and e-mail updates.

The University of Michigan seemed to have the best outreach to students by using a lot of different media techniques, which included a Facebook page, twitter page, e-newsletter, and including videos of speakers and news stories at the university on their website. The update emails are targeted at different groups of the university, like faculty or graduate students.

Specificity/centrality to university community

The most successful guides made information specific to college living. For example, Brown's guide goes a step beyond describing waste management practices and has a section for types of waste specific to the university community. There is a section on mattress and furniture donation or disposal, textbooks, composting, electronics recycling, battery recycling, and more. This direct style is most relatable for university students.

Wake Forest reveals the potential success of getting faculty members on board with the sustainability guide. Their contributions could greatly enhance the credibility and reachability of faculty to interested students.

While we are unable to attach a complete guide since they are in PDF form, **Exhibit 4** contains highlights from Michigan's and Wake Forest's guides and also contains some creative examples from UC Berkeley's "My Little Green Book."

Phase 2: Development of guide and final product

After the groups in our workshop presented our findings to each other, we began actually developing the sustainability guide. At this point, the decision making process was entrusted in the workshop at large, not just our group, and so many of the resulting decisions were made upon group consensus founded on the workshop's research. A few steps were involved in finishing the design of the guide and implementing the project.

- Group meeting to share our research and agree upon format and content of guide
- Generating content of guide
- Agreeing upon the aesthetic design of the online guide
- Creating and distributing the guide

Step One: Sharing research and finalizing conception design of guide

On Thursday October 27, our workshop collaborated to determine the final guide design. The process involved each group sharing its research and the workshop using the collective information to determining the content and format of the guide. At this point, the workshop did not yet focus on the aesthetic design of the guide. A few of our group's findings were critical in determining the final format of the guide.

- The most successful guides took an online format. These guides were either distributed through email or through social media
- Students respond best to small amounts of clear information. Breaking information up into categories (for example, recycling, water conservation, etc) allowed students to best absorb the information

- Using Berkeley's guide as a best practice, we determined that we could separate our sustainability categories by color-coding them
- Schools that provided information on local sustainable businesses made the information more applicable to students' daily lives

Using these findings, our group suggested that the guide be sent through an email format and that information should be provided as "how-to's" that would be broken into specific categories with information on education opportunities, sustainable living tips, and local sustainable businesses.

The marketing team's research validated that email formats are most successful at UVa and Team Five's tabling efforts proved that categories were a helpful way for students to think about sustainability as a whole and they also were able to provide information on which categories were most important to UVa students.

We ultimately decided on creating two forms of the guide: paper and e-mail. With the paper guide, our workshop would place baskets of tips at various locations around grounds. Our intent was that interested students could pick up individual tips at their own will. The e-mail based tips would be distributed on a weekly basis through the SustainaUnity newsletter.

Step Two: Generating the content of the guide

After agreeing that we should develop how-to guides, we began to develop a list of potential tips. We then ranked the tips so that we could determine which tips would be most useful. However, as all of the tips had high ratings and we were capable of including all tips in our guide, we decided to use all of the tips.

Step Three: Developing the aesthetic design of the online guide

After coming up with the tips, our workshop had a contest in which each group submitted a design for the online guide that would be submitted to SustainaUnity. We ultimately decided on using the design that was the most aesthetically attractive and captured the design goals determined in the October 27th meeting.

Step Four: Creating and distributing the guide

The workshop on Thursday December 1st was largely used to produce the paper version of the guide. In this workshop, we collated the tips and placed them into green bags. Each student took a bag to place at a different common area around grounds.

On December 5th, our workshop leader, Carla Jones, submitted the design to SustainaUnity, and the students in charge of SustainaUnity were excited to use our tips in their newsletter

CONCLUSION

Our final product was a list of easy, how-to tips compiled in a color-coded categorized document. We also printed the tips out on individual pieces of paper and placed them in libraries for students. Now, we are collaborating with SustainaUnity to send the tips out in a weekly email to students on their list serve. It is our hope that students will reference the current tips but also that some group will continue updating the tips and sending them to students.

From the 15 benchmark colleges that we researched, we organized data related to their guides into a chart as a means of documentation. After collecting all of the data in this chart, we highlighted a few of the best practices at these benchmark schools. We recommended the use of these best practices to our workshop. We especially supported the creation of individual "how-to" guides, which would be distributed through an e-newsletter. Along with our other recommendations, our research was instrumental in establishing best practices for our guide.

As far as assessing the success of the sustainability guide in the future, a few different metrics could be used. The first would be the receptiveness of the university community to the guide in terms of whether people are interested in the content and find the guide to be concise, graphically pleasing, and obtainable. . The second metric would be the thoroughness of content in the guide; in other words, we should collect data to determine if the guide covers the topics that the community finds informative. . However, other groups in our workshop already performed an extensive evaluation regarding what the appropriate topics would be for our university community. Another metric is the reach, or distributive success, of the guide. Specifically, assessing our success with this metric would entail evaluating how many students the guide is reaching and whether the guide is reaching all parts of the community, including faculty, staff, undergrad, and graduate students. A final way for measuring the success of the guide is determining how many and which student groups or individuals seem interested in writing more sets of tips to continue the development of the guide.

FUTURE WORK

The one major question at this point in the project is determining who will continue writing the tips. SustainaUnity will, hopefully, continue sending the tips if they continue to be generated. We have identified the format, the basic structure, and the dissemination of tips but we have not determined who will do the upkeep. No resources are required other than time and manpower. The SustainaUnity email is sent out once a week, so the time commitment is small.

On a larger scale, we hope that this project will be a catalyst for a bigger commitment to sustainability efforts at the University. Educating students about simple ways to be more sustainable, we hope to increase their excitement for sustainability and their willingness to make material changes in their daily habits.

LESSONS LEARNED

The most significant barrier we had to overcome in our project was getting in touch with administrators or student leaders of sustainability initiatives at our target schools. It was difficult to get responses in many cases or the responses were minimal and incomplete. When we did not get responses, we turned to internet sources to evaluate the guides and sustainability initiatives ourselves by gathering information from the school's websites. If we did this again, we may want to have a larger group of target schools so we could maximize the amount of responses we got.

Another issue we had was how to measure success in sustainability guides at other schools, since it is somewhat subjective and difficult to obtain information on. Through looking at college sustainability ratings we were able to get a better idea of whether the school had a focus or special interest in sustainability, and therefore would be more likely to have a guide. We had to make some assumptions in this area, but most of the time it was easy to gather whether a guide was exemplary and had ideas we could use for our own guide. If we did this again, we might want to think about creating a more organized method of determining the success of sustainability guides at other schools.

EXHIBITS

Exhibit 1: Copy of e-mail sent to students (from Ryan Lechner)

Subject: Virginia student needs help with Sustainability Report

Hello,

I'm a fourth year at the University of Virginia and am working on developing a comprehensive sustainability guide that will inform students about sustainability efforts around our campus. I am currently working on a precedent analysis to see how this topic has been approached at other universities, and I was hoping you could help answer a few questions that I have about your initiatives.

Would you or some administrator involved with sustainability be willing to answer three quick questions? If so, I've included the questions below.

Best,
Ryan

Questions:

- What sort of information about sustainability on your campus do you distribute to students? Is there any form of a sustainability guide or sustainability tour available to students? We're less interested in a guide for incoming students and more interested in any reference piece targeted to the student body as a whole.
- In what form is sustainability information shared with students (e.g. a physical guide, a website, a smart phone app, etc.)?
- How successful have these campaigns been?

Exhibit 2: Collection of responses

John Foye (Penn):

Ryan,

No problem. Hopefully my info will be of some use.

- The information presented to students is largely sporadic. There is not a tour. However, there are recycling guides presented to students when they move in.
- Outreach is essentially limited to events. There are various forms of point-of-use sustainability information, such as recycling info near bins, and information about electricity near light switches. The Green Campus Partnership website is also very informative: <http://www.upenn.edu/sustainability/>. Also, Penn started an Eco-rep program my freshman year (I'm a member). The idea is to use peer education to influence daily habits. There are eco-reps in all the college houses and most of the sororities and fraternities. We serve as mouthpieces for sustainability information and news.
- The campaigns have been successful. Our recycling rate has grown, and our energy use has decreased. However, we are no where near the saturation point. In general, I would say the majority of the students here are still apathetic towards sustainability issues.

Let me know if you want me to clarify anything, or if you have more questions.

Best,
John

Claire Holmes (Cincinnati)

Ryan,

Currently the main resource for information about sustainability on campus is our website: www.uc.edu/sustainability. We do not publish a guide, but we are in the process of creating a tour. Via our website we provide students with information about Office of Sustainability programming and events (including a garden, bike share & open shop, special event & Athletics recycling, lectures, workshops, film series, etc.), relevant classes being offered, the University's Climate Action Plan and carbon footprint, and initiatives spearheaded by other departments (student organizations, LEED buildings, energy conservation, recycling and waste management, transportation options, green housekeeping, etc.). The website strives to be a place to describe the Office of Sustainability's work as well as a launching platform from which students can find links to other sustainability related activities and opportunities on campus.

As for the success of these outreach methods, it is hard to gauge. Interest in and knowledge of sustainability efforts has been growing steadily on campus over the past several years, as measured by participation. Is that a result of our outreach and education efforts? Perhaps, but it also a product of more engaged and aware students arriving on campus as well as the increasing role of sustainability in society generally. Sort of a chicken and the egg question I suppose. With our engagement efforts we want to both spark interest in sustainability in the UC community and provide information that already interested community members seek.

I hope this information helps.

Tavey Capps (Duke)

The closest thing we have to this is a resource developed last year for incoming students – the GreenBook -- <http://sustainability.duke.edu/action/greenbook/index.html> - all Duke students get a “BlueBook” during the summer with all the information they need about coming to campus, what to bring, signing up for classes, etc. so this was a project we helped our undergraduate environmental group work on to create a “GreenBook” or guide to sustainable living at Duke.

This was the first year of the project so we are still assessing it. We did do an online version and a short, print version – students were pretty adamant that they wanted something hard copy to give out – we put a lot more in the online version and referred to it in the hard copy. They used different methods for distribution – some orientation events, tabling in the dining hall where all first year’s eat, etc.

It could be useful to talk with Allison Donnelly, d_allison_d@sbcglobal.net – the undergrad that led the effort on the Green Book – get her feedback on the process, what they might have done differently, plans for the future, etc.

One other project that attempts to educate incoming or prospective students is our model green dorm room that is featured on summer tours of campus – unfortunately we don’t have the space to include this on the tour year round but we are working on options for this.

http://sustainability.duke.edu/campus_initiatives/buildings/GrnDrmRm.html

<http://www.youtube.com/user/sustainableduke#p/c/3A3850338AF933D5/9/XIzDUMViD14>

I would say these are probably the two main projects aimed specifically at new students coming to campus to educate them about sustainability. If you review our website and in particular the “Get Involved” section you can see a bunch of other educational programs we have developed. We are working on a graduate/professional school version of the GreenBook this year as well with our graduate environmental student group.

Let me know if you have questions. Tavey

PS- I would be curious to see the results of your research when you get it all compiled – to see what has been successful at other schools. Thx.

Sam Malin (Northwestern)

OK so here we go,

- What sort of information about sustainability on your campus do you distribute to students? Is there any form of a sustainability guide or sustainability tour available to students?

This is a great question. First I'll start with an example I remember from living in the dorms on campus. All of the showers have little stickers at eye level saying how much water can be saved by reducing your shower time. Quantifying this environmental impact is good, because just saying "a lot of water" is pretty useless. I *do* wish, however, that the stickers could somehow put the gallons of water metric into something a little more tangible or meaningful, since most people don't understand what the *impact* of using all that water is. Identifying impact is extremely difficult for water, so that's probably why.

We have no sustainability guide. We do have conferences and speakers come to campus to speak on subjects such as water management, energy, efficiency, environmental justice, public health, etc., so these are events where students can come learn. I understand that the question is about distributing information, so perhaps this isn't

relevant, but I would say that at Northwestern, the predominant form of disseminating information is by bringing students to our (us student groups and academic departments) educational events.

One event that we hold every year is Earth Day, where we set up something called Mt. Trashmore right along the main sidewalk of campus. This is a pile of garbage that we stack up over the course of the day to demonstrate how much garbage is generated in a day. Again, this isn't necessarily distributing information, but it is getting to people. Again, in general the way our sustainability groups work at NU are that we have a bunch of different student groups that hold events on campus. They often involve bringing people to one location to learn, but in some cases students will post small tidbits of energy- or water-saving tips in dorms. I think this last bit is limited in scope though, and not that prevalent.

I realize at this point that I've kind of lost any kind of adherence to your three questions, so sorry. Hopefully you can pick and choose what you want.

Here's a reference to your third question:

How successful have these campaigns been?

I wish you had asked us different questions because I feel like this area you're asking about is probably our weakest attribute. However, I think the success of our environmental/sustainability-themed groups speaks to how important sustainability is to students. There is already quite a bit of knowledge out there on these sorts of energy, water and waste related issues. We have hundreds of students involved in sustainability at campus, and I feel like because of that, we have a large impact potential. If we know something about sustainability, we may tell our friends or force them to change something. For instance, after doing an energy audit of a dorm on campus, I realized that payback on replacing incandescent lights with CFLs can be only a month. So when I started living off campus, I told all my friends that (and I tell lots of other people that too, I'm an energy-nerd), so now they have a better idea of energy efficiency.

I hope that helps you out man. Calvin's a good friend of mine, so I'm glad to help a friend of his out. Let me know if you have any questions.

-Sam

Liz Chan (Berkeley)

Hi Ryan,

I would be more than happy to answer any questions on developing a comprehensive sustainability guide. I'm currently managing a similar project called the "Little Green Book" (littlegb.berkeley.edu), and have worked in our very own Residential Sustainability Program on campus. I'm really excited about this topic, so please ask away!

Cheers,
Liz

Caitlin Brooks (Wake Forest); Note: variation of questions asked

Kate,

My name is Caitlin Brooks and I am the fellow in the WFU Office of Sustainability. I graduated from Wake Forest University in May and secured a one-year fellowship with our office. Prior to this job, I was the inaugural Communications and Outreach intern in our office.

Dedee (our director) thought I would be the best candidate to answer your sustainability questions because I can offer the perspective of both staff and student. I hope my responses provide you with everything you need. If not, please feel free to ask me to clarify or for more information.

1) What issues do students at your school identify as most important to them? (For example, recycling, water conservation, reduction in carbon footprint).

When the office was founded, we did a survey to find out the answer to this question. Most students identified recycling and waste reduction as the most important sustainability issue to them. In the more than two years since then, we've done much to help satisfy the recycling needs of campus, but it still remains as one of the most public issues we address. We distribute personal recycling bins to any residential student who wants them and launched a very successful Choose to Reuse campaign, among other projects.

On a separate and perhaps more important note - our students identified sustainability with our university motto - Pro Humanitate ("for humanity"). An overwhelming number of students drew the connection between humanity and sustainability - which was unexpected and also wonderful. Much of what we do is human-centered.

2) What channels do you leverage to get sustainability information to the student body? What led you to that choice? Is it effective?

We have a comprehensive communications plan. This was my internship for two years and is now one of my primary responsibilities as a staff member. We use social media as a primary means of communicating with students. We have an active Facebook page, Twitter feed and Flickr stream. We also have a sustainability volunteers list served through which we advertise any and all volunteer opportunities. We also reach our students through our monthly e-newsletter, which is a compilation of news stories we write each month.

The most direct way we engage students in the sustainability conversation is by offering 8-10 paid project-based internship positions on topics ranging from communications to game day recycling to our Choose to Reuse campaign. We have set internships each year, but students can also propose internships. Our students are dialed into Greek Life, other student organizations and friend circles. They are our primary liaisons with the rest of the student body.

3) Does your University have a sustainability guide? If so, in what format (e.g. iPhone app, pamphlet) was it put out to students and/or faculty?

We print a campus Green Guide and distribute it to new students. The guide is available online for the rest of the student body as well as faculty and staff. You can view it on our web site [here](#). An intern developed the content during the first year of the office. We update it as needed and have it printed professionally using sustainable printing techniques (FSC certified paper, etc).

4) What are some major roadblocks you've encountered in distributing information on sustainability?

Great question! We are actually in a new phase of our communications strategy. We realize that we were marketing to the same people every time we sent an e-mail. We love our core group of supporters, but really need to expand our sphere. To this end, we try to partner with as many different groups as possible for events to reach their constituents as well as our own. We also send targeted e-mails and invitations to people we've established relationships with to try to get people that may not otherwise be interested. It's a work in process, but I'm hopeful that we will overcome this hurdle.

If you'd like to know anything else about sustainability on campus, please check out our web site: sustainability.wfu.edu or e-mail me.

Best,
- Caitlin

Matt Spaulding (Yale)

Hi Ryan,

I hope this helps.

- What sort of information about sustainability on your campus do you distribute to students? Is there any form of a sustainability guide or sustainability tour available to students?

Everybody is e-mailed a copy of the Yale Strategic Plan (which I e-mailed to you earlier). However, I doubt that most students actually take the time to read it and understand Yale's sustainable practices. I'm a coordinator for STEP (SustainabiliTy Education Peers) which is a paid position on campus that focuses on providing sustainability tips and information to undergraduates. We host events in which we hand out cake or donuts in exchange for students taking sustainability quizzes and testing their recycling or energy use knowledge. It's a very basic structure: they learn how to be more sustainable in some way, and we give them sugar.

- In what form is sustainability information shared with students (e.g. a physical guide, a website, a smart phone app)?

I mostly addressed this in the previous question. We largely talk to people 1-on-1 to make them really listen. We also use recycled bookmarks with energy use information printed on them (i.e. the number of lightbulb hours = a load of laundry in the dryer) and some large posters at big events. In addition, STEP has an active Twitter, Facebook Page, Tumblr, and website.

- How successful have these campaigns been ?

All of our campaigns have seen some level of success. We have not changed the rate of recycling drastically, but we expect it to change in the near future as Yale is switching over to single-stram recycling (shown to increase recycling rates). Our campaign to eradicate trays in the dining halls has been greeted with slow, but incredible success.

Trayless dining reduces food waste by 50% and reduces water use (as trays require washing after use). In the past two years since STEP has started pushing trayless dining, trayless rates have risen from 40% to 80% on average. There is some fluctuation between dining halls, but this is the average. Other very successful endeavors include having the Office of Sustainability purchase lots of CFLs and then trading students CFLs for their incandescents to reduce energy use within the college. We also knocked on people's doors and explained to them how to adjust their heat which led to a decrease in energy use. Previously, students did not know how to lower their heat and would simply open a window.

Please let me know if you need any more information,
Matt Spaulding

Michigan: Lisa Pappas

1) What issues do students at your school identify as most important to them? (For example, recycling, water conservation, reduction in carbon footprint).

ANSWER: In a recent online survey of 240 current UM undergraduate students, the following sustainability issues were identified in order of importance:

- **Developing advanced energy technology**
- **Advancing sustainable transportation**
- **Advancing sustainable building technologies**
- **Improving human access to clean water in the developed and developing world**
- **Identifying the risks of climate change and barriers to action**
- **Advancing Great Lakes restoration and ecosystem protection**

2) What channels do you leverage to get sustainability information to the student body? What led you to that choice? Is it effective?

ANSWER: We use a variety of methods to reach students about sustainability news. One way we find particularly effective is through a student group called the Student Sustainability Initiative—a PEER GROUP which can reach out to other students through events, e-mails, monthly meetings, Facebook, and peer-to-peer word of mouth. We coordinate with them because we feel there is greater receptiveness for "student outreach" messages when they are received from fellow students. IN ADDITION: Thanks to targeted e-mail address lists we are able to receive from U-M Administration, we are also able to develop targeted e-mail campaigns specifically to different parts of the student body. This is effective so we're reaching only those relevant to the message we are sending.

3) Does your University have a sustainability guide? If so, in what format (e.g. iPhone app, pamphlet) was it put out to students and/or faculty?

ANSWER: Yes, please see attached.

4) What are some major roadblocks you've encountered in distributing information on sustainability?

ANSWER: No significant roadblocks.

5) If you have a sustainability guide, may we have a copy of it?

ANSWER: We also have a print copy of the sustainability guide (question #3), which we distributed to all incoming students. If you provide your address, we'd be happy to mail a copy.

Exhibit 3: Findings from precedent analysis

A. Content of first seven schools

Schools	Content					
	Energy	Recycling	Transportation	Water	Food	Other
Berkeley	yes	yes	no	yes	yes	Paper, CO2
Brown	n/a	n/a	n/a	n/a	n/a	-
Cornell	yes	no	yes	yes	yes	General consumption; paper; home living
Duke	no	yes	yes	no	yes	Housing
Florida	n/a	n/a	n/a	n/a	n/a	-
George Mason	n/a	n/a	n/a	n/a	n/a	-
Illinois	n/a	n/a	n/a	n/a	n/a	-

B. Engagement of first seven schools

Schools	Engagement								
	Task forces	Events	Green tips	Career, research, or grant info	News/videos	Pledge	Social media connections	Connections to green businesses	Other
Berkeley	no	yes	yes	no	no	yes	no	yes	Green map showing green stores; Food map also showing restaurants and farmers markets with green focus
Cornell	no	no	yes	no	yes, link to sustainability plan at cornell	no	no	no	Links to other websites
Duke	yes	yes	no	no	no	yes	yes	no	Carbon calculator; green workplace certification
Florida	"Green Teams" for each academic department	Green Speaker Series, Tailgator Recycling	yes, in guide and Sustainable Transportation Guide	Sustainable Solutions Awards	News on Website	Yes	Facebook Page, Twitter @sustainableUF	Green Guide lists sustainable local businesses	E-Waste Directive, Recycling Directive, Idling Directive, Sustainable Purchasing Directive, Bulk Mail Directive
George Mason	Environmental Action Group, week long summer training for environmental protection	Sustainable Living Roadshow	Green Tip of the Week	no	no	no	Blog, Twitter, Facebook, email, google group	Business sponsor for summer program	-
Illinois	yes, Forum, Operations, and Education	on site, yearly Sustainability Week and Earth Week	"Green Living Tips" on Website, 57 Ways to Improve your Home Environment	Student Sustainability Grants	news feed online, e-newsletter	no	facebook, Twitter (@SustainableUIUC)	no	Illinois Sustainable Campus Contract, Illinois Climate Action Plan, Energy Liasons Program

C. Distribution methods of first seven schools

Schools	<u>Distribution</u>				
	Website	Paper	Blog	Social media presence	E-newsletter
Berkeley	yes	no	no	no	no
Cornell	yes	no	no	no	no
Duke	yes	yes	no	no	no
Florida	yes	no	no	no	no
George Mason	yes	yes	no	no	no
Illinois	yes	yes	yes	yes, Twitter @sustainable UF	yes

D. Content of last five schools

Schools	<u>Content</u>					
	Energy	Recycling	Transportation	Water	Food	Other
Michigan	n/a	n/a	n/a	n/a	n/a	-
Penn	yes	yes	yes	yes	yes	-
UC San Diego	n/a	n/a	n/a	n/a	n/a	-
Wake Forest	yes	yes	yes	yes	yes	Note that guide is 25 pages long
Wisconsin	n/a	n/a	n/a	n/a	n/a	-
Total	4	4	4	4	5	-

E. Engagement of last five schools

Schools	Engagement								
	Task forces	Events	Green tips	Career, research, or grant info	News/videos	Pledge	Social media connections	Connections to green businesses	Other
Michigan	no	Events Listed on Site	In green guide, there is a "eco-tips" section	Planet Blue Ambassador Program ("eco-reps"); Small Scale Grants, Planet Blue Student Innovation Fund	Planet Blue E-Newsletter, Videos about Sustainable News at the University	no	twitter (@sustainableUM)	Lists Local Sustainable Businesses in "Green Guide"	Student Sustainability Initiative: A roundtable forum for students from different sustainability groups to collaborate on green projects
Penn	yes	yes	no	no	yes	yes	yes	no	Links to podcasts
UC San Diego	Split into 8 different initiatives	no	no	yes	no	no	no	Partnering with individuals and organizations	Sustainability Resource Center
Wake Forest	Campus Garden, Green team task forces	13 days of celebrating the earth, sustainable coffee breaks, Think green Thursdays	no	Paid sustainability internships highlighted	no	yes	Blog, Twitter, Facebook, email	no	Links to green dining and green transit
Wisconsin	yes	Sustainability Forums	no	no	news on website	no	Twitter: @UW Sustainable Mgmt	Food Wiki Partners with Local businesses	Sustainability Forums
Total		9	10	7	6	7	5	8	7

F. Distribution methods of last five schools

Schools	<u>Distribution</u>				
	Website	Paper	Blog	Social media presence	E-newsletter
Michigan	yes	yes	no	yes, twitter	yes
Penn	yes	no	no	no	yes
UC San Diego	n/a	n/a	n/a	n/a	n/a
Wake Forest	yes	yes	yes	yes (facebook, twitter)	yes
Wisconsin	yes	no	no	yes, Twitter: @UW Sustainable Mgmt	yes
Total	11	5	3	6	7

Exhibit 4: Highlights from some sustainability guides

GO GREEN!

GREEN THRIFT

Try finding what you need from second-hand stores, consignment shops, Craigslist.com, freecycle.org, or Facebook marketplace. Chances are you can find what you're looking for without going to the store and paying full price. If you have to buy new, shop local. Buying products from locally owned businesses helps support the local economy and can also mean shorter transport distances for your goods. See page 14 for great local stores.

EAT AND SHOP GREEN

- Buy regionally produced food.
- Buy groceries at farmers markets.
- Grow your own food or help out in the Campus Garden.
- Eat less meat.
- Buy organic produce.
- Use reusable shopping bags.
- Look for the green leaf signs at the Pit indicating local and/or organic food.



GREEN GRADUATION PLEDGE

Wake Forest seniors can sign a pledge to keep up their sustainable lifestyles after graduation. More information about the pledge and how to sign it will be available to you before your graduation.

impact

The campus-wide shift to CFLs resulted in a 7% decrease in electricity consumption from June 2007 even as electricity prices have increased.

GREEN TRANSIT

- Walk, bike, take a bus or carpool. If you need a car for personal use, reserve a Zipcar.
- Combine trips and errands, take it easy on the gas and brake pedals, and go slower on the highway (you will improve your gas mileage).
- Don't idle your engine for more than 10 seconds – it takes less gas to turn it off and back on.
- Fly less often and purchase carbon offsets if you have to fly. Visit Live Neutral for information: liveneutral.com.



Bring your own reusable mug to Starbucks and Campus Grounds for a discount!

GO GREEN!

SAVE ELECTRICITY

- Turn off your computer if you're not going to be using it for one hour or more. Don't forget to turn off your printer, television, and speakers when they aren't in use. A power strip makes this easy: plug all your electronics into one, and flip the switch when you aren't using them.
- Buy compact fluorescent light bulbs – most of them are spiral shaped. They last about 10 times longer than regular incandescent bulbs and use 75% less energy.
- Turn your lights off when you don't need them. During the day, try opening the blinds for natural light.
- Look for the Energy Star label when you buy new electronics.
- Keep your room thermostat set to 68 degrees in the winter and 78 degrees in the summer. On nice days keep windows open to naturally regulate the temperature.
- Turn down the thermostat at night – pile on blankets and layers instead of increasing the temperature – and turn off the heat completely when you're out of your room or apartment.
- Air dry clothes when possible and only dry full loads. Clean lint out of the dryer beforehand to allow it to be more efficient.
- Use desk lamps instead of overhead lamps when possible.
- Keep your computer screen only as bright as needed to reduce electricity usage.
- Disable screen savers– they prevent your computer from hibernating.

SAVE PAPER

- Every time you go to print, ask yourself if you really need to print.
- Conserve paper and print double-sided.
- Set your printer to automatic double-sided printing.
- Recycle newspapers or read them online instead.
- Use fewer paper towels by using hand and dish towels instead.
- Buy products made from recycled content, look for the FSC-certified logo and buy chlorine-free paper to cut down on pollution.
- Buy reusable plates and cutlery rather than those made from disposable paper and plastic.

REDUCE WATER USE

- Get a filter and reusable water bottle so you can stop buying bottled water – tap water is just as clean as bottled water, and a filter will make it taste great. Make sure your bottle does not contain Polyvinylchloride (PVC) and Bisphenol A (BPA) - chemicals found in some plastics.
- Take shorter, cooler showers, to save water and the energy needed to heat the water.
- Turn off water when brushing teeth and shaving.
- Only wash full loads of laundry and dishes.

RECYCLE

- Use the recycling collection bins for bottles, cans, and paper.
- Get rid of your old cell phones, cameras, iPods and CDs in TechnoTrash bins, located in ZSR Library, the Benson Copy Center and the Book Store.
- Dispose of hazardous waste, such as paints, batteries, and motor oil at the 3RC EnviroStation. Look online for directions.
- See the table in this guide for more information on waste reduction and recycling on campus.

REDUCE WASTE

- Buy well made things that you really need.
- Before throwing your stuff away, see if there's a way to reuse it and double its lifetime.
- Buy in bulk to reduce packaging materials and the fuel used to transport it to the store.
- Donate or sell used, but not abused, clothes, furniture, and belongings.

Wake Forest's "Green Guide"

SUSTAINABLE WEEKENDS

Being sustainable need not hamper your fun!
Here are some great tips to make your weekend plans fun and sustainable.

How to Throw a Sustainable Party!

- Instead of buying disposable plates, go to a local thrift store, neighborhood yard sale, or even your grandmother's basement to stock up on **plates** for a chic and eclectic vibe. This can also be done with cups and silverware.
- Use **natural light** whenever possible to light the room.
- Use **beeswax candles!** They give off negative ions that actually help clean the air.
- Bring **your own cups!** Have fun, and make a game out of it. Whoever brings the coolest cup wins a prize!
- Offer **locally produced** snacks and locally grown produce. (See pg. 13 for places to shop.)
- Serve healthy "finger food," with **no plates or utensils** necessary.
- **Ditch the speakers!** Invite musician friends to perform cool music to dance to all night long!
- **Ban cigarettes** (and all that packaging). Who wants to smell bad anyway?
- **Spread the word!** Make sure your guests know that the food is locally grown and produced, or that there is a band instead of a DJ, which saves energy.

How to Throw a Sustainable Movie Night!



LANDFILL LOSERS

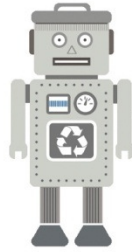
Those familiar red plastic cups take 450 years to decompose!

Michigan's "How to be Green like a Wolverine"

Berkeley's "My Little Green Book"

Green Tips

brought to you by the Little Green Book Spokes-robots

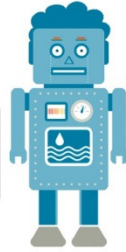


R3

Did you know that rare metals used in cell phones and electronics are fueling the war in the Congo? Reduce, Reuse, Recycle.

"Try saying this 10 times: Reduce, Reuse, Recycle."

1. Recycle computers, cell phones, inkjets, batteries, & other e-waste. Ask the mail-room or visit our website for more info!
2. Save cardboard boxes for moving out and gift-wrapping.
3. Exchange free items in ReUse Stations on campus, in the res halls, and on exchange.berkeley.edu.



Hydrobot

Compared to bottled water, tap water is under stricter regulations. Plus, one-third of all bottled water is filtered tap water anyway.*

"Are you cool enough to take 5-minute showers?"

1. Take a Navy shower -- turn off the water when you lather, and be done in 5 minutes!
2. Take back the tap with your cool reusable water bottle!
3. Report leaks in the sink or the toilet to the front desk immediately. Leaks can waste up to 7,000 gallons of water per month!*



Nerdie Wordie

"I want to be your derivative so I can be tangent to your curves."

1. Take notes on one-side-clean papers from the computer lab. Better yet, start your own stash!
2. Buy, rent, and sell books at the Cal Student Store!
3. Engage in one of over 400 sustainability-related classes or check out any of Cal's 30+ student groups.



Energy Ro-watt

"Energy. Ro-watt."

1. Wash clothes in cold water and save more than 500 lbs of CO₂ per year.*
2. Replace 1 incandescent light bulb with a CFL (compact fluorescent light bulb) to save 150 lbs of CO₂ and \$30 a year.*
3. Unplug unused electronics to avoid phantom loads!

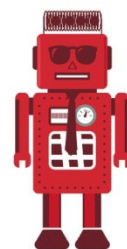


Foodie-two-shoes

Worldwide, raising animals for food generates more green house gases than the entire transportation sector combined.*

"Hey, are you going to eat that?"

1. Compost leftovers and compostable utensils and Cal Dining to-go boxes in the green bins in the res hall or on campus.
2. Avoid the Freshman 15 by filling your dining common plate with only what you will eat and eating less meat and dairy!
3. Opt for less-packaged foods as much as possible.



Mr. Ro Bro

"You must be the cause of global warming cuz I'm meltin' like a polar ice cap."

1. Throwing a party? Ask guests to bring their own plates, or buy compostable cups and utensils -- remember to compost them!
2. Hang out with friends at one of Berkeley's cool thrift stores or used bookstores.
3. Why eat out when you can host a B.Y.O.M.P. (Bring Your Own Mug & Plate) potluck on Memorial Glade?

The Little Green Book is a comprehensive guide to everything green in Berkeley.

Visit littlegb.berkeley.edu for prizes, more info on classes, restaurants, fun events, and other valuable resources Berkeley has to offer!

Interested in the cause? Drop us a note at littlegb.cal@gmail.com ;)

*Data sources can also be found on the website.



IS FOOD CHEAP?

Where did last night's dinner come from? Does one Cup o' Noodles give birth to another? Do the mac 'n' cheese gods send a box of Easy Mac to Safeway shelves when they know a hungry student wants one? Whose hand is it that feeds you? (and please think carefully before you say your own).

Consider the following...

- Farm laborers often work 14 hour days, 7 days a week, at minimum wage, with no overtime pay, no right to form a union, no disability insurance coverage, and no right to a day of rest. Children who work in the fields can be paid \$3.20 an hour, less than half of the \$7.15 minimum wage.
- Pesticides sprayed on crops are associated with causing cancers, autism and neurological disorders, especially amongst farm workers and their communities.
- Approximately one sixth, or 102 billion people across the world (including 36 million in the U.S.), do not have secure access to food. Every day, almost 16,000 children die from hunger-related causes (that's one child dying every five seconds).
- Women produce more than half (in some regions as much as 80%) of all the food that is grown around the world, while they bear the brunt of other domestic tasks like preparing and cooking that food and caring for children.

(Obviously there's a whole network of plants, animals and laborers working for our benefit)

- More than 70% of the grain and cereals grown in this country are fed to farmed animals, and it takes up to 16 pounds of grain to feed just one pound of meat. The world's cattle alone consume a quantity of food equal to the caloric needs of 8.7 billion people - more than the entire human population on Earth. About 20% of the world's population, or 1.4 billion people, could be fed with the grain and soybeans fed to U.S. cattle alone. It also takes 5,000 gallons of water to produce 1 pound of meat, while growing 1 pound of wheat only requires 25 gallons.
- The American National Cancer Institute spends \$1 million per year to encourage people to eat fruits and vegetables, while the U.S. food industry spends more than \$33 billion a year to advertise candy, snack, cereal and fast food products (viewed an average of 21 times per day by children aged 8 to 12).
- Around 90% of the energy used in the U.S. food system goes to processing, packaging, transporting, storing, and preparing food, as opposed to growing or eating that food. On average, produce in the U.S. travels 1800-2000 miles from farm to consumer, contributing 30,800 tons of greenhouse gas emissions to the atmosphere every year.
- Spinach and other green leafy vegetables can lose as much as 50% of their nutrients within five days of harvest.
- Around 1000 plants grown for food, beverages, fibers, spices, and medicines worldwide need to be pollinated by animals in order to produce the resources (fruits, vegetables, even cotton) on which we depend. In the U.S., pollination by honey bees and other insects produces nearly \$20 billion worth of products annually.

This map was created to aid the busy, hungry student in giving the pieces of our broken food system back together as it once was. Whether we will one day be chemists, politicians, engineers, lawyers, or doctors, what we eat is essential to our everyday lives and interconnects us to the Earth and each other, whether we see this or not. Read this map, use it, meanwhile always thinking about the impact of your actions.

Key

ORGANIC

In an organic system, food is grown by the power of the sun, water, and insects, rather than synthetic fertilizers and pesticides, genetic engineering, growth hormones, irradiation or antibiotics. Organic food reduces health risks, builds healthy soil, preserves diversity and tastes great!

LOCALLY-SOURCED FOOD

The closer to home the food is grown, the less it has to travel. That means it's grown and harvested in its meat-to-be season, so it's healthier, fresher, and tastier, and helps to reweave the community food web.

(But within each of these categories, there are loopholes for businesses to make exceptions. Please research these places for yourself if you feel inclined, to truly know the origin of what you eat.)

SUSTAINABLE PRACTICES

These sites are into making a smaller impact on the earth. They may compost, keep a garden, use recyclable or biodegradable packaging, or use as little energy as possible to prepare their foods.

LOCAL BUSINESS

These businesses are not chain stores you can find in every city. That means the company is more accountable and your money goes back into our local economy instead of the coffers of a distant CEO.

VEGETARIAN

VEGAN

If everyone in the U.S. became vegetarian for one day, we'd save 1.5 billion pounds of crops, enough water to supply 6 small states for four months, 70 million gallons of gas, 3 million acres of land, 33 tons of antibiotics, and \$70 million in economic damages.... Vegan? Think about it.

COOPERATIVELY-OWNED

Within a cooperative, there is no manager or boss. All workers are in charge of the business and have a say in how the operation functions. This may guarantee fairer treatment for workers and a better sense of community.

\$ A meal = \$10 or less

\$\$ A meal = more than \$10

\$\$\$ Prices vary depending on what you get

(So, no, a meal you think is cheap most likely is not. Such a simple thing as eating costs time, land, labor, money and energy. In an ideal world, perhaps what something costs would include not only the price but the resulting deterioration of the world around us. Unfortunately, this is not that world, and we are but humble college students. Therefore prices are included.)

GROCERY STORES

- 1 & 5 & 7 Andronico's
- 2 Monterey Market
- 3 Berkeley Horticultural Nursery
- 4 Berkeley Bowl (sells some organics)
- 6 Whole Foods (some food is locally sourced)
- 8 Bear Market (sells some organics, takes meal points)
- 9 Golden Bear Cafe (GBC) (See #6. Also takes cash)

RESTAURANTS

- | | |
|--------------------------------|---|
| 1 Digs Bistro \$\$ | 9 Gather \$\$\$ |
| 2 Breads of India \$ | 10 Amanda's Feel Good Fresh Food \$ |
| 3 The Bread Workshop \$ | 11 Raw Energy Organic Juice Cafe \$ |
| 4 Gioia Pizzeria \$ | 12 Bobby G's Pizzeria \$\$\$ |
| 5 Caffe Venezia \$\$ | 13 Zatar \$\$ |
| 6 Herbivore \$\$\$ | 15 Village Grounds \$ |
| 7 Venus \$\$ | 16 Cafe Gratitude \$\$\$ |
| 8 Razan's Organic Kitchen \$ | |

- | | |
|-------------------------------------|------------------------------------|
| 17 Thai Delight Cuisine \$\$\$ | 21 Tara's Organic Ice Cream \$ |
| 18 Guerilla Cafe \$ | 22 Ici Ice Cream \$ |
| 19 Gregoire \$\$\$ | 23 Nabolom Bakery \$ |
| 20 Chez Parisse Cafe \$\$ | 24 Cafe Muse \$ |
| 21 The Cheeseboard Collective \$ | 25 Adagia \$\$ |
| 22 Cesar \$\$ | 26 Yali's Cafe \$ |
| 23 Juice Bar Collective \$ | |
| 24 Saul's Deli \$\$\$ | |
| 25 Free Speech Movement Cafe \$ | |

14 & 24
Yali's Cafe \$

CaDining (takes mealpoints)

25 Cafe 3 \$

30 Clark Kerr Dining \$

31 Crossroads \$

35 FootHill Food Court \$

FARMERS MARKETS

- 1 Tuesdays, 2pm-6pm
 - 2 Saturdays, 10am-3pm
 - 3 Thursdays, 2pm-7pm
 - 4 "The Local," Mondays, 11am-3pm
- ### GARDENS
- 1 Spiral Gardens
 - 2 Longfellow Middle School Garden
 - 3 Berkeley Community Orchard
 - 4 Ohlone Community Garden
 - 5 Edible Schoolyard
 - 6 U.C. Student Organic Garden
 - 7 Codornices Community Garden
 - 8 People's Park Garden
 - 9 Victory Garden

(Plus many other school gardens! Look them up here: <http://ecologycenter.org/bcgs/>)

RELEVANT ORGANIZATIONS

- Ecology Center (ecologycenter.org)
- Sustainable Agriculture Education (SAGE) (sagecenter.org)
- Community Alliance with Family Farmers (CAFF) (caff.org)
- The California Food and Justice Coalition (CFJC) (foodsecurity.org/california)
- Forage Oakland (forageoakland.blogspot.com)
- Buy Local Berkeley (buylocalberkeley.com)
- David Brower Center (browercenter.org)
- The Berkeley Institute of the Environment (BIE) (bie.berkeley.edu)
- Berkeley Youth Alternatives (byonline.org/head)

CLASSES WORTH TAKING

- | | |
|---|---|
| Environmental Economics and Policy 140 - Economics of Rice, Agriculture and the Environment | Nutritional Science and Toxicology 10 - Introduction to Human Nutrition |
| Environmental Science, Policy and Management 117 - Urban Agriculture | Nutritional Science and Toxicology 104 - Human Food Practices |
| Environmental Science, Policy and Management 118 - Agricultural Ecology | Nutritional Science and Toxicology 108 - Introduction and Application of Food Science |
| Environmental Science, Policy and Management C159 - Human Diet | Plant and Microbial Biology 10 - Plants, Agriculture and Society |
| Geography 130 - Natural Resources and Population | Public Health 206B - Food and Nutrition Policies and Programs |

(Plus a few details - visit social.org for more info)

Exhibit 5: Key knowns and unknowns

Knowns


- Email format
- How to guides
- Concise
- Join with SustainaUnity
- Interactive/Engaging
- Issues include energy, water, recycling, transportation, and consumption patterns
- Little Funding
- Graphically pleasing

Unknowns



- How often would email be sent out? (With what other group, etc.)
- How to measure success
- Funds (not sure exactly how much)
- Best marketing approach

Key takeaway: We have a concept for the guide but need to figure out how to market it and measure its effectiveness

Final Poster



Sustain(Ability): Tips & Tricks

WHY SHOULD YOU CARE?
 The world is changing and it's becoming increasingly important for everyone to make responsible decisions and to live a more sustainable lifestyle. Living a sustainable life isn't all restrictions though, it can be fun! There are a lot of easy and creative ways for you to make a real difference. Here are a few tips to get started.

Food

City Market:
where local vendors offer fresh, produce, herbs plants, grass-fed meats, crafts, and baked goods.
April- October:
Saturdays: 7AM- 12PM
November:
Saturdays: 8AM- 2PM

Take a Class:
Learn more about Sustainable through any of the following courses.
Spring Semester 2012:
ANTH 5420: Anthropology of Food
BIOL 1060: Principles of Nutrition
EDHS 4630: Nutrition
PAVS 4500: Nutrition in a Changing World

Relay Foods:
Save time. Save the planet. Shop all your favorite local shops, area farms, and restaurants online at: www.relayfoods.com
Simply choose a pickup location or have your food delivered, and your shopping is done!

Water

Reusable Water Bottles:
Skip getting the plastic bottles by refilling at the tap, and save money and the Earth!
Did you know that if 5% of gym-goers adopted this habit the U.S would reduce plastic waste by about 30 million pounds?

Reasons to Conserve:
+ 86% of all U.S Plastic Bottles are NOT recycled!
+ Water scarcity affects 1 in every 3 people OR 1.2 Billion people.
+ Meeting U.S plastic bottle needs requires over 150 million barrels of oil OR fuel for 100,000 cars for a year.

Tricks for Conserving:
+ When defrosting food, don't run it under warm water, defrost it over night.
+ Try minimizing how many plates you use for a meal.
+ When hand-washing dishes, try reducing water flow

Energy

Curtains:
In the daytime, open south-facing window curtains to allow sunlight in for natural heating. At night, close them to reduce chill. Use white curtains, shades, blinds etc., to reflect sunlight.

Thermostats:
+ By keeping the thermostat at 68 degrees or by turning it down 10-15 degrees for eight hours, you could save 5- 15% a year.
+ Avoid keeping TVs, lamps, and other appliances near thermostats. The radiating heat confuses the thermostat.

Cars:
+ The best way to "warm-up" your car is driving it. No more than 30s of idling in the Winter is needed. Anything more wastes fuel and increases emissions
+ Idling gets you 0 miles per gallon

Wash in Cold:
Save energy by washing clothes in cold water with cold-water detergents

Recycling






How to Recycle Paper:
Separate white paper, mixed paper, and cardboard.
+ White Paper = computer paper, notebook paper, paper with some colored print, and green bar paper
+ Mixed Paper = copier paper, newspapers, blueprints, envelopes and spiral notebooks, file folders, magazines, tissue paper, and gift wrap.
+ Cardboard = all cardboard and paper grocery bags. If there is no specific container for cardboard, place beside recycling receptacle

Lights:
Light out? Find out how to recycle light bulbs? Energy saving light bulbs (CFLs) don't belong in the trash! CFLs have dangerous mercury in them. Instead bring them to the Local McIntire Recycling Center: 611 McIntire Rd, Charlottesville, 22902
or the IvyMaterial Utilization Center: 4576 Dick Woods Rd, Charlottesville, 22903
Home Depots and Ikeas often take the light bulbs too. To increase sustainable recycling, buy aluminum aluminum items instead of plastic when possible!

Natural Resources

Paper:
+ To reduce junk mail ask that your name be removed from mailing lists. For more information, visit: www.stopwaste.org
+ Print Double-Sided
+ Make your own stick notes by reusing paper
+ Place a recycling bin right next to your trashcan as an easy reminder. Also, set up a collection box for paper reuse!
+ If possible, avoid using paper products. Try using cloth towels instead of paper towels. Use mug instead of a paper cup. Instead of the paper To-Go box, invest in a plastic one from UVA Dining.
+ Reuse your gift wrap OR be creative! Ex. Try using recycled newspaper.

Transportation:
+ Get in the fast lane, and take advantage of HOV lanes by carpooling.
+ Take advantage of public transportation, like UTS, the CAT, or the Free Trolley.
+ Need a car for a quick trip? Try the ZIP Car program.

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