SUPER SUSTAINABILITY
THE ROAD TO NEUTRAL

Volume: 1 Issue: #1
Welcome to the members of the Class of 2016,

It is a pleasure to have everyone of you at Middlebury, with your own unique experiences, talents and personality ready to learn and to begin to build a legacy to proudly share with others about your time here. Middlebury is a place to envision changes that can make the world a better place - with a community of people and resources to help you make that change real.

Every class leaves its mark. In 2006, a group of students, working with many others at the College and beyond, challenged us to become carbon neutral - to have a net of zero emissions of climate warming greenhouse gases resulting from our activities on campus. Over the course of the year they did the hard work and research to show how we can achieve that ambitious goal. The Class of 2007 set in motion our effort to "make neutrality a reality" by 2016 which, as you know, is the year you will graduate.

The class of 2007 and succeeding classes built their carbon neutrality initiative on the heels of a decision to spend $12 million to build a new energy system that uses woodchips rather than fossil fuel oil. By doing so, the College significantly reduces its carbon footprint and makes use of a local, renewable resource from within 75 miles of the campus - a decision that has saved us millions of dollars and shifted our spending for fuel into the local economy. That $12 million decision was based on a thorough feasibility study conducted by students, faculty and staff and their recommendations to the trustees about the best way to do it.

We are well on the way to achieving our goal and we need your participation to assure we get there. You can start by informing yourself further about the "Make Neutrality a Reality" effort at Middlebury and by growing more energy and carbon literate. You can also choose to be more efficient and smart in how you use the limited resources consumed every day on campus: energy, water, materials... because, at the end of the day, what will matter most is that we have a community of people at Middlebury who are constantly thinking and acting creatively in ways that help us build a more sustainable future.

This graphic novel is about the sustainability journey we are on. At the end of the novel you'll find ways you can learn more about sustainability on campus and how to get involved. I look forward to the future and the legacy that will be left here by you and your class of 2016.

Sincerely,

Jack Byrne, Middlebury College Sustainability Integration Office
Four new students, Jake, Clare, Matt, and Andrea are settling into their new living spaces, they are having trouble getting comfortable in their new home. The late summer heat is ravaging the new Midd Kids during Orientation week, and their frustration surrounding their inability to discomfort is growing.

UGH!

This heat is unbearable. I think heatstroke's starting to set in...

It's never this hot back home. I could've sworn it was supposed to be cold in Vermont.

You're telling me. I just barely made it out of soccer practice this morning. It was already over 90° before 8:00 AM.

I'm ninety-seven percent certain I'm going to die!
I know, I wanted to take a walk over to the CFA to check out the dance studios, but I'm pretty sure I'd melt on the walk there.

You're lucky Jake, at least your room's shaded at this time of day.

I guess. Although the building's still a furnace, I've had the windows open and five fans running all day and it still hasn't gotten cool.

Five fans sounds a little excessive, don't you think? I could barely afford one back home in the city.

NO! Have you been outside yet today?

If I knew Vermont was going to be a furnace I may as well have gone to school back home. Florida's hot, but at least we know how to air condition.

There has to be some kind of way to make this better!

I've got an idea, let's go down to the basement of Ross. It's gotta be cooler down there, and there are some hallways we could hang out in.

If it makes this afternoon any more bearable, I'm all for it.
The four venture down into the depths of the basement of Ross, farther than most freshmen ever dare to go.

It doesn't look like anyone's been down here in ages...

Honestly, I can't really see why anyone would want to...

At least it's a little cooler. Hey guys, what's that room at the end of the hall?

No idea. Let's investigate.

Hey, the door's open!

What's inside?!
Old Nalgene's all over the floor, a few beat up pairs of hiking boots, some Greenpeace posters on the walls... that's all I can really see.

Hey, this Nalgene's glowing... and I don't think it's one of the glow in the dark ones. There's some dust over the logo...
Finally someone let us out of that bottle! It was really starting to get stuffy in there.

I know, five years was WAY too long to be stuck in there!

Um, excuse me... Out of curiosity, could you please explain what just happened? I think I speak for all of us down here when I say I'm thoroughly confused.

Sorry about that, we totally should have introduced ourselves. I'm Tiziana, this is Leman, and those two goofballs are Caitlin and Jamie. We're just a few of Middlebury's Sustainability Heroes!

That's lovely, but why exactly are you all here?

You guys were clearly in a pretty sad state if you had to venture here to the Cave of Conservation, so now we're here to help you!

Well, I can't really deny that, but what does sustainability have to do with us not coming down with heat stroke in our dorms?
Everything! Heat is about energy, and we've all put a lot of time and effort into helping Midd use less energy back when we were students.

So you're telling me that you guys were all students at one point?

Yup, that's right.

Then how did you all get to be superheroes? And trapped in a Nalgene?

Well, the whole Nalgene thing is kind of a long story... But we became Sustainability Heroes because of what we did while we were students to make sure the College does its part to keep the world a cooler place!

Like how?

You know that heat wave you guys are dealing with? That's a product of what happens when there's too much carbon dioxide in the atmosphere. Energy-intensive activities, like travel, using too much electricity, and running air conditioners put loads of carbon in the atmosphere, which traps even more energy in the form of heat! All of us have played some role in helping the College cut down the amount of carbon it produces.

Oh yeah! See Lemar over there? He started a group that brought together all the environmental groups on campus together to talk about social justice.

Jamie, he was one of the Sunday Night Group members and helped start 350.org.

And Tiziana, she helped spearhead the development of biomass heating on campus!
Wow, that's all pretty impressive. So what did you do, Caitlin?

Oh, me? Not much. I just helped put together the proposal that outlined the College's commitment to carbon neutrality - that means a net of zero carbon emissions from College activities by the time the class of 2016 graduates.

Yup, that was her. She just got some friends together, talked to the president of the College, organized a J-term course to research how to do it and before you knew it they had the College trustees committed to becoming carbon neutral by 2016.

That sounds awesome!

It was, I mean it did take a lot of work. We did a boatload of research and got help from lots of professors and other experts at the College.
Well if something like that was so easy for you then why can't we seem to do small things like getting comfortable in our dorms?

Oh, believe me, you can. Let me take you on a little campus tour!
AHHHH, what's going on, why are we flying?!

Where are you taking us?!

Are we going to make it back to the ground before the dining halls close?!

Relax you won't go hungry. Now let's see... where should we start the tour?

Hey, we're back in my room!
Yeah, and it hasn’t exactly gotten any cooler in here...

Well that’s exactly why we’re here. Let’s cool this place down and cut some carbon along the way.

So what do we do?

Let’s start with some easy stuff. Keep your windows open...

...and the door open. That way you’ll be able to get better air circulation, and the natural light reduces the need to keep your lights on.

Fans do a good job of keeping cool air moving in a room, but make sure that you turn them off when you leave your room so they don’t waste energy.

Also, pull down the shades to keep direct sunlight from heating the room up.

See those desk lamps with incandescent bulbs in there?

Regular light bulbs produce heat, and CFL’s don’t! So some new light bulbs would definitely help.
Wow, that all seems pretty easy. And it's cooled down in here compared to earlier.

Yup, it's that easy. It's really amazing how using less energy can keep us comfortable.

Yeah, it's really awesome. But what happens if it's just too hot to stay in our rooms?

Well let me show you!

Hold on now, classes haven't even started yet! Why are we in the library?!
Actually, it's ridiculously comfortable in here. Is the library air conditioned or something?

You got it! The College only air conditions the buildings it absolutely has to during the hotter months.

Big buildings with lots of technology like the Library, Axinn, and BitHall. And even in those buildings, the thermostats are kept relatively high - 75 degrees - in order to minimize energy and electricity use. So make use of these spaces whenever you can, and lower the carbon cost-per-user that it takes to cool these buildings. And quite a lot of the buildings on campus have been specially designed to ventilate well. Like the Atwater dorms, which helps cut down on energy usage and costs too. Even though the College is committed to carbon neutrality, it's still committed to keeping you comfortable.
Wow, this is getting more and more interesting as it goes on.

I know, my sister was one of a bunch of students who got the College to lower the thermostats in the winter from 70 to 68 degrees to cut a bunch of fuel consumption.

I didn’t know half of this stuff. What else could there be?

Well now that we’ve seen an example of how we manage energy to keep spaces habitable in this heat, let's take a look at how building design can help keep a place comfortable and cut carbon emissions.

AHH, not the flying again!

SNAP!
Hey, I think I know where we are! This is the Franklin Environmental Center, isn't it?

Yes sir!

And I'm pretty sure it's LEED Platinum Certified.

Um, sorry but... what does that mean exactly?

Basically that the building was designed to be as energy efficient as possible, healthy for the people using it, and has lots of locally sourced materials and that the US Green Building Council said that it met that goal. Right?
The Franklin Environmental Center is an incredibly energy efficient building. It's been designed to absorb and lose as little heat as possible, which is accomplished by how well it's insulated.

It's also got windows that let in lots of daylight, which eliminates the need to keep lights on, and helps warm the building by letting sunlight in during the winter months. Some trees were strategically planted to shade the hot side of the building in summer.

There's a special system for transferring heat from stale air leaving the building to cold, fresh air entering in the winter and the reverse in Summer.

Plus there are solar panels on the roof which help provide about twenty percent of the building's power!

This building is really smart about using energy!
Correct! And less energy used means less carbon put into the atmosphere. I think you guys pretty much have it all down at this point!

Ugh, guys, I think something's happening...

Jake, why is the Nalgene glowing again?!
I don’t believe it, what just happened?! Where did I get a leotard from?! Someone get me down from here! Calm down Matt!

Well congratulations guys! Now that you’ve mastered everything I had to teach you, you’ve become Middlebury’s newest Sustainability Heroes!

I always wanted to be a superhero! So what does the job entail, just flying around and telling other mild kids the same things you told us?
Yes, but that’s only part of the job requirements.

What we’ve already got in place is great, but as you may know, we’re not carbon neutral yet.

With that said, it’s your job as our new sustainability heroes to come up with new solutions and ideas for how we can continue cutting energy usage and carbon emissions here at Middlebury.

Students like myself may have helped set the wheels in motion towards carbon neutrality, but it’s up to you to drive us there.

 Doesn’t sound too awful... Wait, what’s that!? 
All of a sudden, from out of the blue, another figure bursts out of the Old Chapel. It turns out to be none other than Ron Liebowitz himself!

Caitlin, it's been too long! How have you and the other sustainability heroes been?

I've been great Ron, but this isn't really about me right now...

Ah! I'm so sorry, these must be our newest batch of sustainability heroes, right?

Um, I think so?
That is what they've been telling us...

Well very glad to hear it. I absolutely love working with the new heroes every year - Caitlin had mentioned we had a great group coming in and I was beyond excited! Much of what happens at Middlebury wouldn't be possible if it weren't for everything students do.

Wait, aren't you the President of the College? Why are you here talking to a bunch of freshmen?

Because open dialogue between the students and the administration is absolutely necessary if we're to work together. We rely on your creativity and innovation to make change and keep the College moving forward. And we've got lots to get done!

WE do?

You bet. In fact, I've already got a challenge for you. Help us figure out how we can achieve carbon neutrality BEFORE 2016. Are you up for it?
As long as I don't end up stuck in a Nalgene, challenge accepted!

Middlebury's new sustainability heroes then flew back to campus.

...ready to write their own chapter in the College's saga of sustainability...

...and to leave their mark on the College forever.
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Learn more and get involved.

Take a virtual sustainability tour of campus at go/2016.

Join a student organization working on sustainability initiatives. See the list of current groups at http://www.middlebury.edu/sustainability/tools/orgs.

Find out how the college decreases its carbon emissions as an institution at http://www.middlebury.edu/sustainability/energy-climate/neutrality.

Learn ways to decrease your carbon footprint at go/footprint.

To find out more about getting involved on campus contact the Sustainability Integration Office:

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