

UNIT 6: Health & Wellness

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UNIT 6: Health & Wellness

Unit Summary

This unit seeks to bolster the health and wellness of staff, students, and administrators on campus by introducing new ways to lead a balanced, active, and healthy lifestyle. By incorporating many of the habits covered in units 1-5 and building in some new recommendations, your school may see reduced absences during cold and flu season, more non-academic student/staff interactions that promote this common goal, and a more mindful staff and student body that fosters happier learning and working environments. This unit is designed to inspire all members of campus to bring balance to their over-scheduled, over-programmed, stress-filled days and find moments of peace and relief on and off your school site. But before students break out their stethoscopes and take a pulse on the health of your campus, preview this table below that maps the path to achieving the health and wellness goals of your school's green@school certification.

<p>Actions <i>Here are some actions students will take to complete the green@school checklist and reduce their school's environmental impact.</i></p>	<ol style="list-style-type: none"> 1. Become Health & Wellness Experts—observe alternative transportation habits, discover Community Supported Agriculture benefits and more. 2. Interview relevant school and district staff to find out, how they stay active, what they eat for lunch, and how they have fun. 3. Investigate passive solar design, water fountains, the lunch line, and student activities. 4. Find simple and easy ways to improve health and happiness.
<p>Campaign Opportunities <i>There are several opportunities for student teams to raise awareness and educate their teachers and peers.</i></p>	<ol style="list-style-type: none"> 1. Conduct a scavenger hunt with your peers and offer prizes for the fastest or most creative team. 2. Educate your teachers and peers on why it is important to stay active, eat SLO, and spend some time each day in natural sunlight. 3. Conduct a body solar flash-mob with the school. 4. Research, design, and install a native plant or vegetable garden. 5. Build a teacher/student sports campaign encouraging a friendly competition between students/staff during lunch or after school.
<p>Skills <i>Each team will build & apply different skills to accomplish their green@school goals. Here are some specific skill sets students may exercise across this program.</i></p>	<ol style="list-style-type: none"> 1. Become a local advocate—educate your peers and teachers about healthy and sustainable food and beverage choices 2. Explore your creativity—design effective signage to encourage sustainability on campus and at home 3. Find your inner detective—investigate student and staff behaviors that can be modified into healthy practices.
<p>Contacts <i>Here are the people you may want to help students contact.</i></p>	<p>Nutrition Services Manager, your school district Grounds-Custodial Manager, your school district Principal and Vice Principals, School site Who else? Have students develop their own list!</p>

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Certification Checklist

As described in the green@school Handbook, each Unit corresponds with a targeted resource conservation goal and a specific section of the California Green Business Program's checklist, designed so that students will use this tool (the checklist) to assess their current campus environmental actions and identify opportunities for improvement (learn more at <http://www.greenbusinessca.org/>). This will occur following their deep dive into the subject through the lessons and activities shared in this chapter that seek to build their baseline knowledge on the subject before they are asked to become subject matter experts assessing their school's operations and practices. The checklist is included at the beginning of each unit so you can see what you're building towards, but again, know that its expected use will follow the activities and lessons shared below. Further, completing the actions in this checklist will enable your school to receive statewide recognition for your environmental leadership (bonus!). To assess the health & wellness practices on your campus, walk through this list with your students, administrators, or other resource-relevant school site staff.

green@school Certification Checklist

#	Measure/Action/Practice	Does your school meet this measure?			Controlled by school staff administrator (SA), school district (D) or Students (ST)	Investigation Notes and Status
		YES	NO	DON'T KNOW		
Health & Wellness						
Employee Benefits						
Recommended (Take your school above & beyond!)						
1	Offer employee health & wellness benefits such as: health screenings, nutrition/weight loss services, fitness facilities/discounts, flexible spending accounts, group exercise opportunities, preventative health workshops, flex-time for exercise, informal sports league, etc.					

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green@school Certification Checklist

#	Measure/Action/Practice	Does your school meet this measure?			Controlled by school staff administrator (SA), school district (D) or Students (ST)	Investigation Notes and Status
		YES	NO	DON'T KNOW		
Health & Wellness						
2	Create a bike buddy/bike ambassador program					
3	Offer bicycle safety and/or maintenance trainings					
4	Introduce bike fleet and/or bike share program					
5	Increase bike rack and/or storage capacity					
6	Offer employee/student alternative commute incentives (i.e. parking cash-out, subsidized transit passes, tax-free commuter benefits, guaranteed ride home)					
7	Establish a CSA program for employees and/or offer community CSA pick-up location at your school					
8	Encourage employees and students to participate in local CSA program. Purchase produce at farmers markets for cafeteria or school events.					
9	Provide healthy vending options (fruit juice, milk, soy vs. sugar sweetened beverages, candy bars and potato chips)					

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Student Learning Outcomes

In this unit, students will become proficient in the vocabulary and concepts describing health and wellness and how it relates to sustainability and a green school. The following outcomes will be achieved through activities, campaigns, demonstrations, analysis, and investigations conducted by your green@school team. After completing this unit, students should be able to:

1. Identify how their school's infrastructure and equipment affects their health such as indoor air quality, water quality, classroom temperature, ventilation systems, and natural light.
2. Articulate how their school acquires food and how this food impacts their health and the environment.
3. Characterize how their peers and staff eat and stay active.
4. Connect with the resources (air, water, food, and sunlight) needed to sustain their lives.
5. Offer new ways students and staff can find alternative transportation options and articulate why it is so important for student and staff health to walk and bike to campus each day.
6. Demonstrate leadership on campus and implement initiatives/campaigns to encourage healthy living.

Lesson Plan

This unit will guide students through the basics of Health & Wellness and suggest innumerable ways to infuse healthy choices and overall wellness into the daily structure of their lives and the lives of peers, staff, and family. Instructors will coordinate a scavenger hunt of your campus to identify potential improvements, support student interviews of staff and peers about their current habits, and help grow student knowledge on their journey to become experts in encouraging new ways to lead a healthy and balanced lifestyle. Ultimately, your students will be able to determine which opportunities they wish to pursue to rally student support for change.

LESSON 1: HEALTH & WELLNESS 101: WHY SHOULD I CARE ABOUT HEALTH, BALANCE, SUSTAINABILITY?

LESSON 2: DESIGN IT BRIGHT: FOOD AS FUEL

LESSON 3: DESIGN IT BRIGHT: CONNECT WITH THE AIR YOU BREATHE

LESSON 4: DESIGN IT BRIGHT: 80% WATER – OUR PLANET, OUR BODIES

LESSON 5: DESIGN IT BRIGHT: SUPER STELLAR SOLAR

LESSON 6: GROWING GREENER: BIKE, WALK, AND WIN

LESSON 7: GETTING GREEN DONE: INFLUENCE PEERS, STAFF, FAMILY, COMMUNITY

A note to instructors: the plug-and-play activities shared throughout all green@school units are framed for your students, with the hope that you can simply offer/print these activities for their direct use. No extra prep time required!

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Lesson 1: Health & Wellness 101: Why Should I Care About Health, Balance, and Sustainability?

The World Health Organization defines health as “a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity”.¹ Definitions of health and wellness connect with mental health, social health and, more globally, public and environmental health. Public health refers to the “science and art of preventing disease, prolonging life, and promoting health through organized efforts and informed choices of society”.² Environmental health is a branch of public health concerned with all aspects of the natural and built environment that may affect human health and so is also connected to the right to breathe clean air, drink clean water, eat real food, and have access to wildlife and open spaces.³ Environmental health also addresses how to mitigate exposure to chemicals, toxins, and other factors that can potentially adversely affect the health of humans and other life on this planet. These basic definitions and concepts can be shared with students as you shepherd them on this journey to understand how everything around them (*from the construction materials in your school, to the equipment that helps it run, to the plants and trees on or absent from campus*) and the decisions they make (*from the food they purchase, to the drinks they consume, to the activities that make-up their everyday*) can impact their health.

➤ Action Activity | Campus-wide Scavenger Hunt

Here students will explore how your campus impacts their health and wellness and consider ways to improve campus health as a part of the green@school certification process.

Directions: In teams of 4 or 5, complete as many tasks from the Scavenger Hunt as possible within the teacher allotted time. Tasks do not need to be completed in any particular order and teams are encouraged to begin on different tasks to minimize clustering across campus. In the table below, students will record their findings and any interesting insights they learn, as well as a recommendation they have for their peers and for the school to make to improve health. At the end of the class, each group will present one lesson learned from their scavenger hunt experience. Teams will gain points for completing each task (i.e. recording an observation and recommendation for each task). Students can also be asked to vote on which recommendation was the most creative, which recommendation they’re most likely to implement in their daily lives, and/or which recommendation the school is most likely to implement (their instructor can be the judge on that point). The team with the most points wins the teacher-determined prize 😊 and/or bragging rights!

¹ Preamble to the Constitution of the World Health Organization as adopted by the International Health Conference, New York, 19-22 June, 1946; signed on 22 July 1946 by the representatives of 61 States (Official Records of the World Health Organization, no. 2, p. 100) and entered into force on 7 April 1948.

² Wikipedia, accessed 12/21/14 at http://en.wikipedia.org/wiki/Public_health

³ Wikipedia, accessed 12/21/14 at http://en.wikipedia.org/wiki/Environmental_health

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Area	Task or Action	Observations	Personal Recommendations	School Recommendations
Campus	Liquid Sweet Tooth! Find four bottled or canned drinks. Arrange them in the order of highest to lowest sugar content on your desk in the classroom.			
	Trash Art! Find at least three wrappers on campus and create a collective collage. Use your collage to tell a story about what your classmates are eating and/or throwing away.			
	Alternative Commutes... Walk to the bike racks on campus and estimate the number of bikes there. Assuming there are approximately 1000 students enrolled at your school, calculate the percentage of students who biked to school today.			
	Let's Get Moving! Time how long it takes to walk one lap around your school's track. Use this time to estimate how long it would take you to walk 1 mile and 2 miles (which are often considered walk- or bike-able distances!).			

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Area	Task or Action	Observations	Personal Recommendations	School Recommendations
Cafeteria	<p>What's for lunch? Explore the hot lunch line and learn from your lunch lady– What's for lunch today and how were these items selected? <i>(For all-star points: note any senate bills that direct these purchases).</i></p>			
	<p>Food waste galore... Ask your lunch lady about the types of food and packaging get thrown away each day. Ask for an approximation of the quantity of one particular leftover item (of your choosing!) thrown out in one day – for instance, milk cartons, extra salad, etc. <i>(For all-Star points: ask your lunch lady for any suggestions of how you could help reduce food waste from the cafeteria!).</i></p>			
	<p>What's on your lunch tray? Discuss your favorite brunch and lunch items with your teammates. Do you think these items are healthy? Write down two of the items discussed and two healthier alternatives.</p>			

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Area	Task or Action	Observations	Personal Recommendations	School Recommendations
Office	<p>Survey the staff...Ask at least one office staff member the follow questions and record your findings:</p> <ol style="list-style-type: none"> 1. Do you bring your lunch or buy locally? If you do buy your lunch, where is it from? 2. Do you think your school encourages students and staff to be healthy? How could they provide more opportunities for improved health and wellness? 3. Write your own question 			

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Lesson 2: Design it Bright: “Peeling Back the Layers of our Food System”

What has happened to food over the years? How has the look of food changed? What’s on a food label? What are additives and preservatives? When was high fructose corn syrup, maltodextrin, guar gum, and hydrogenated soybean oil invented? Does that sound like food? If [we are what we eat](http://www.ecoliteracy.org/essays/we-are-what-we-eat) (<http://www.ecoliteracy.org/essays/we-are-what-we-eat>), what are we really?

In order to understand it’s transformation from something tangible produced on a farm (i.e. fruits and vegetables) to a blend of chemical additives concocted in a laboratory (aspartame, titanium dioxide, red #3, etc.) we need to explore the history of food in the United States. The goal of this lesson is to “peel back” the layers of our food system and unearth its transition from the tools of simple nourishment sought by our grandparents to the label-laden boxed, packaged, wrapped, processed “food” we consume today.



Michael Pollan, a Bay Area resident and CAL professor, has been discussing the role of agribusiness in the food industry for 25 years. He has published several books, including the best seller, *The Omnivore’s Dilemma*. The basic premise of this text is that American’s overuse of corn for feed, oil, syrup, and other food derivatives, coupled with unsustainable factory farming practices, are hiking up the price of fresh food, making it inaccessible to people, and creating a disassociation between people and their food, which should mostly be made up of plants, as it was until our recent history.

Mr. Pollan provides countless examples of our food’s transition from agricultural to industrial: “Take a typical fast food meal. Corn is the sweetener in the soda. It’s in the corn-fed beef Big Mac patty, and in the high-fructose syrup in the bun, and in the secret sauce. Slim Jims are full of corn syrup, dextrose, cornstarch, and a great many additives. The “four different fuels” in a Lunchables meal, are all essentially corn-based. The chicken nugget—including feed for the chicken, fillers, binders, coating, and dipping sauce—is all corn. The french fries are made from potatoes, but odds are they’re fried in corn oil, the source of 50 percent of their calories. Even the salads at McDonald’s are full of high-fructose corn syrup and thickeners made from corn.”⁴

Share this overview with students as a kick-off to the following activities for you to select from to fuel your class’ conversation regarding the challenges of our current food construct.

⁴ Center for Ecoliteracy, accessed on 11/30/14 at <http://www.ecoliteracy.org/essays/we-are-what-we-eat>.

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➤ Discussion Activity | *Michael Pollan on Colbert Nation*

Have students [watch this video](http://thecolbertreport.cc.com/videos/d8p3y1/michael-pollan) (<http://thecolbertreport.cc.com/videos/d8p3y1/michael-pollan>) and encourage them to discuss the questions below in teams, as a class, and with family to inspire them to talk about the food they eat in every day, perhaps in a different way from their ancestors and likely quite differently than their descendants.

1. What percent of the foods you eat are cooked by someone else? Are they cooked by a family member or another individual/business?
2. Do you cook any of the food that you eat?
3. Can you name the ingredients of your lunch today?
 - How much of it was plant based?
 - Did any of it have corn based product in it?
 - Anything organic?
 - Anything from a farmer's market?
 - How typical a lunch is this for you?
 - How does it compare to your breakfast or dinner?

➤ Discussion Activity | *7 Rules for Eating*

Ask students to [read this article](http://www.webmd.com/food-recipes/news/20090323/7-rules-for-eating) (<http://www.webmd.com/food-recipes/news/20090323/7-rules-for-eating>) that lists the seven rules for eating – outlined by Michael Pollan. Pollan says everything he's learned about food and health can be summed up in seven words: "Eat food, not too much, mostly plants." Direct them to fill in the table below and ask them to be honest about recording their own habits and opportunities to transform their table to match that suggested by Mr. Pollan. Once students have completed the table (on the next page), ask that they share their experience with a peer, the class or a family member.

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Pollan's Rules	What can you do to meet this rule?
1. Don't eat anything your great grandmother wouldn't recognize as food. "When you pick up that box of portable yogurt tubes, or eat something with 15 ingredients you can't pronounce, ask yourself, "What are those things doing there?" Pollan says.	
2. Don't eat anything with more than five ingredients, or ingredients you can't pronounce.	
3. Stay out of the middle of the supermarket; shop on the perimeter of the store. Real food tends to be on the outer edge of the store near the loading docks, where it can be replaced with fresh foods when it goes bad.	
4. Don't eat anything that won't eventually rot. "There are exceptions -- honey -- but as a rule, things like Twinkies that never go bad aren't food," Pollan says.	
5. It is not just what you eat but how you eat. "Always leave the table a little hungry," Pollan says. "Many cultures have rules that you stop eating before you are full. In Japan, they say eat until you are four-fifths full. Islamic culture has a similar rule, and in German culture they say, "Tie off the sack before it's full.""	
6. Families traditionally ate together, around a table and not a TV, at regular meal times. Enjoy meals with the people you love. "Remember when eating between meals felt wrong?" Pollan asks.	
7. Don't buy food where you buy your gasoline. In the U.S., 20% of food is eaten in the car.	

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➤ Action Activity | Fresh Farm Food

Now that students have investigated their own eating habits and mapped a plan to implement Pollan’s seven rules for eating, it may be clear that one of the best ways to accomplish these goals is to hit the farmer’s market or sign up for a community supported agriculture (CSA) – introduce students to this concept by exploring more [here](http://www.localharvest.org/csa/) (<http://www.localharvest.org/csa/>). Essentially a CSA includes the following: a farmer offers a certain number of "shares" to the public. Typically the share consists of a box of vegetables, but other farm products may be included. Interested consumers purchase a share (aka a "membership" or a "subscription") and in return receive a box (bag, basket) of seasonal produce each week throughout the farming season.

Promote these access points to healthy, sustainable food by encouraging students to get involved in the choices and kinds of food their family purchases! Ask them where their family typically buys food. Here are four scenarios to facilitate a conversation on the topic:

- If students volunteer that they shop at a **local grocery** store, ask them how to find the healthiest, freshest food choices.
- If they note that their family is part of a **CSA**, ask them which one. Why they selected this CSA and share with students how it works (i.e. how often does it arrive? Do they pick it up? If so, where?)
- If their family shops at a **farmers market**, ask them which one? Where is it located? What vendors/stands do they shop at and why (i.e. what produce do they have)? Where are these vendors/stands’ farms located?
- If your students share that their families do not typically shop for farm fresh produce, suggest a “field trip” to one of the places listed below and ask them report on their experience shopping locally (*instructor bonus: organize a real field trip for your class to one of these farmers markets so they can explore the sources of their food first hand!*)

Cupertino Square Farmer’s Market	Fridays 9-1pm
Cupertino Oaks West Coast Farmer’s Market	Sundays 9-1pm
Full Circle Farm, Sunnyvale	http://fullcirclesunnyvale.org/
Mountain View	http://cafarmersmkts.com/markets/category/mountain-view
Sunnyvale	http://www.urbanvillageonline.com/markets/sunnyvale/
Saratoga	http://cafarmersmkts.com/markets/category/saratoga
Campbell	http://www.urbanvillageonline.com/markets/campbell/
Veggielution	http://veggielution.org/CSASunnyvale
Freshness Farms	http://www.freshnessfarms.com/
Middlebrook Center for Urban Sustainability, San Jose	http://www.cngf.org/

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Lesson 3: Design it Bright: Air Apparent- Connect with Your Breath

The next step in our path to health and wellness is to understand how our health is inexorably linked to the air that we breathe. It's not just a simple equation of having access to enough oxygen, with so many chemical compounds filling our air, and ultimately our lungs. The purposes of the lungs are to bring oxygen (O₂), into the body and to remove carbon dioxide (CO₂). Oxygen is a gas that provides us energy while carbon dioxide is a waste product or "exhaust" of the body⁵. So what happens when this energy source is less than pure?

The Environmental Protection Agency, responsible for regulating and protecting our nation's natural resources, notes that the health consequences of air pollution are considerable. "On a global basis, the World Health Organization (WHO) estimates that 800,000 people per year die from the effects of air pollution. Moreover, air pollution contributes significantly to respiratory disease in children. [The World Health Report 2002 - Reducing Risks, Promoting Healthy Life](http://www.who.int/whr/2002/chapter4/en/index7.html) (<http://www.who.int/whr/2002/chapter4/en/index7.html>) has more information about the global effects of air pollution.⁶

So what can your students do to understand the causes of and opportunities to abate air pollution? Check out the following opportunities to engage them in this advanced but imperative topic.

➤ Research Activity | *Every Breath You Take*

Breathing is required to sustain our life, but it's often made difficult by environmental (i.e. elevation), industrial (i.e. emissions), and/or health (i.e. asthma) factors. This activity will help students become more conscious of the air they breathe, which supplies them with oxygen necessary to survival.

Ask them to walk around campus and make observations about the following:

- What do they smell?
- How easy or hard is it to breathe?
- Are their noses stuffy or have they started to sneeze?
- Is it easier to take big breaths?
- Is the air stuffy or fresh?

Have them use the table provided below to note observations about the air quality at different areas of your school's campus. It's ideal to have them do this periodically, over the course of a month or over the course of the school year, to learn also how weather/seasons can also affect their shared air.

⁵ American Thoracic Society, accessed 12/21/14 at <http://www.thoracic.org/clinical/copd-guidelines/for-patients/anatomy-and-function-of-the-normal-lung.php>

⁶ Environmental Protection Agency, accessed 12/21/14 at <http://www.epa.gov/oia/air/pollution.htm>

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Location and time of day	Record observations about your breathing. (Is it shallow, hard to breath, easy deep breaths, feels fresh, are you holding your breath?)	Record any questions you have (reference the above list of questions).	Why do you feel that way?
Courtyard			
Lunch line during lunch			
Classroom			
Library			
Staff Room			
Bathroom			
Locker Room			
Nature Center or Garden			

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➤ Discussion Activity | *Pranayama Positives in School*

This article explains that many schools in the United States have started to incorporate yoga and breathing exercises as part of their Physical Education curriculum. [Huffington Post's Yoga in Schools: Phys Ed for the 21st Century:](#)

(http://www.huffingtonpost.com/kripalu/post_7033_b_4908253.html).

Pranayama, or the control of breath, provide many benefits to help manage the daily stresses that school can bring, may aid in more restful sleep, and also support students in developing better active breathing, particularly helpful for those who play sports or have asthma. Here are some questions to help students reflect individually or in a group, prompted by the article below:

1. How do you feel at school? Stressed, anxious, worried?
2. Do you know anyone who has been bullied or picked on by other kids?
3. Do you feel comfortable talking to an adult about your stress?
4. How do you deal with it?
5. When are you happiest at school?
6. When are you calm and secure?
7. When do you learn the best?

Instructors are also encouraged to walk students through breathing techniques and serve as student's sleep/stress/sustainability trainer. There are so many options available online, but here's one shared by [Harvard Medical School](#), based on the time you or students might have available:

(http://www.health.harvard.edu/newsletters/Harvard_Womens_Health_Watch/2008/July/relaxation_techniques_breath_focus).

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➤ Action Activity | *Pranayama Pre-Test Pointers*

Now that your students understand how breathing can help address daily stress, sleep and more, conduct an experiment at school where you lead your class in a breathing exercise before an exam. The breathing exercise should not take more than five minutes. Be sure to have the students' attention before beginning. Conduct the guided breathing before every test for two months and record how the students respond to the brief sessions. Feel free to take a poll to determine if they find it helpful to reduce stress and anxiety before exams.



Pranayama Exercises⁷:

From their desks (or any place where negativity finds its way) coach students through one, a few or all of these six techniques to help keep calm and carry on.

Image [Source](#)

1. Sama Vritti or “Equal Breathing”

- *How it's done:* Balance can do a body good, beginning with the breath⁸. To start, inhale for a count of four, and then exhale for a count of four (all through the nose, which adds a natural resistance to the breath). Got the basic [pranayama](http://www.yogajournal.com/practice/709) (<http://www.yogajournal.com/practice/709>) down? More advanced yogis can aim for six to eight counts per breath with the same goal in mind: Calm the nervous system, increase focus, and reduce stress.
- *When it works best:* Anytime, anyplace—but this is one technique that's especially effective before bed. “Similar to counting sheep, if you're having trouble falling asleep, this breath can help take your mind off the racing thoughts, or whatever might be distracting you,” yogi Rachel Pacheco says.
- *Level of difficulty:* Beginner

2. Abdominal Breathing Technique

- *How it's done:* With one hand on the chest and the other on the belly, take a deep breath in through the nose, ensuring the diaphragm (not the chest) inflates with enough air to create a stretch in the lungs. The goal: Six to ten deep, slow breaths per minute for 10

⁷ Greatist, accessed on 11/25/14 at <http://greatist.com/happiness/breathing-exercises-relax>

⁸ Yoga breathing, meditation, and longevity. Brown, RP, and Gerbarg, PL. Columbia University College of Physicians and Surgeons, New York, New York, Annals of the New York Academy of Sciences, 2009 Aug;1172:54-62.

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minutes each day to experience immediate reductions to heart rate and blood pressure, McConnell says. Keep at it for six to eight weeks, and those benefits might stick around even longer.

- *When it works best:* Before an exam, or any stressful event. But keep in mind, “Those who operate in a stressed state all the time might be a little shocked how hard it is to control the breath,” yoga guru Rachael Pacheco says. To help train the breath, consider biofeedback tools such as McConnell’s [Breathe Strong app](#), (<http://www.breathestrong.com/apps/>), which can help users pace their breathing wherever they are.
- *Level of difficulty:* Beginner

3. Nadi Shodhana or “Alternate Nostril Breathing”

- *How it’s done:* A yogi’s best friend, this breath is said to bring calm and balance, and unite the right and [left sides of the brain](#) (<http://www.yogajournal.com/poses/2487>). Starting in a comfortable, straight back position, hold the right thumb over the right nostril and inhale deeply through the left nostril. At the peak of inhalation, close off the left nostril with the ring finger, and then exhale through the right nostril. Continue the pattern, inhaling through the right nostril, closing it off with the right thumb, and exhaling through the left nostril.
- *When it works best:* Whenever it is time to focus or energize. Just don’t try this one before bed: Nadi Shodhana is said to “[clear the channels](#)” (<http://www.chopra.com/namaste/meditationmoment>) and make people feel more awake. “It’s almost like a cup of coffee,” our yoga journeywoman Rachel Pacheco says.
- *Level of difficulty:* Intermediate



Image [Source](#)

4. Kapalabhati or “Skull Shining Breath”

- *How it’s done:* Ready to brighten up your day from the inside out? This one begins with a [long, slow inhale](#) (<http://www.yogajournal.com/poses/2452>), followed by a quick, powerful exhale generated from the lower belly. Once you are comfortable with the contraction, up the pace to one inhale-exhale (all through the nose) every one to two seconds, for a total of 10 breaths.
- *When it works best:* When it’s time to wake up, warm up, or to start looking on the brighter side of things. “It’s pretty abdominal-intensive,” yoga instructor Pacheco says, “but it will warm up the body, shake off stale energy, and wake up the brain.” If alternate nostril breathing is like coffee, consider this a shot of espresso, she says.
- *Level of difficulty:* Advanced

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5. Progressive Relaxation

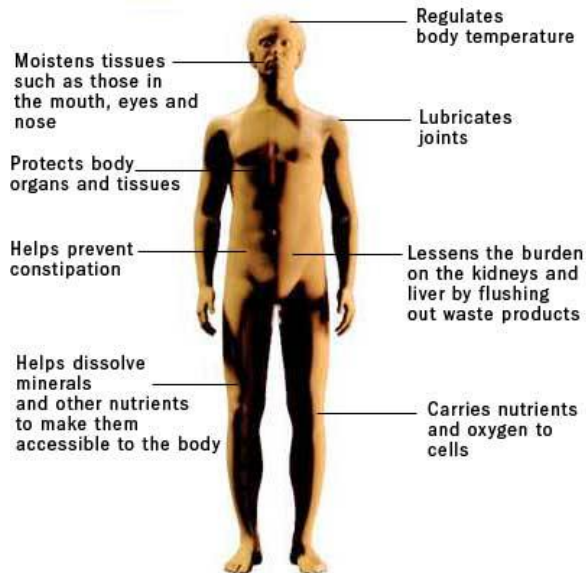
- *How it's done:* To nix tension from head to toe, close the eyes and focus on [tensing and relaxing](http://nccam.nih.gov/health/stress/relaxation.htm) (<http://nccam.nih.gov/health/stress/relaxation.htm>) each muscle group for two to three seconds each. Start with the feet and toes, then move up to the knees, thighs, rear, chest, arms, hands, neck, jaw, and eyes—all while maintaining deep, slow breaths. Having trouble staying on track? Anxiety and panic specialist [Dr. Patricia Farrell](http://www.drfarrell.net/) (<http://www.drfarrell.net/>) suggests we breathe in through the nose, [hold for a count of five](http://youtu.be/2MRze-efF4o) (<http://youtu.be/2MRze-efF4o>) while the muscles tense, and then breathe out through the mouth on release.
- *When it works best:* At home, at a desk, or even on the road. One word of caution: Dizziness is never the goal. If holding the breath ever feels uncomfortable, tone it down to just a few seconds at most.
- *Level of difficulty:* Beginner

6. Guided Visualization

- *How it's done:* Head straight for that “[happy place](http://youtu.be/o5JZKWdzAaU),” (<http://youtu.be/o5JZKWdzAaU>). With a coach, therapist, or helpful recording as your guide, breathe deeply while focusing on pleasant, [positive images](http://psychcentral.com/lib/2006/guided-visualization-a-way-to-relax-reduce-stress-and-more/) (<http://psychcentral.com/lib/2006/guided-visualization-a-way-to-relax-reduce-stress-and-more/>) to replace any negative thoughts. Psychologist Dr. Ellen Langer explains that while it's just one means of achieving mindfulness, “Guided visualization helps puts you in the place you want to be, rather than letting your mind go to the internal dialogue that is stressful.”
- *When it works best:* Pretty much any place you can safely close your eyes and [let go](http://greatist.com/happiness/23-ways-to-reduce-stress/) (<http://greatist.com/happiness/23-ways-to-reduce-stress/>).
- *Level of difficulty:* Intermediate
- While stress, frustration, and other daily setbacks will always be there, the good news is, so will our breath.

UNIT 6: Health & Wellness

Lesson 4: Design it Bright: 80% Water – Our Planet, Our Bodies



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Water plays a very important function on our planet as we learned in the water unit. But it also plays a vital role in our bodies. Water is at the center of life. This is why the human body can last weeks without food, but only days without water. The body is made up of 50 to 75 percent water. Water forms the basis of blood, digestive juices, urine and perspiration and is contained in lean muscle, fat and bones. Learn more about the importance of water, the recommended daily intake and signs of dehydration through this [Better Health Channel Article](#).

(http://www.betterhealth.vic.gov.au/bhcv2/bhcarticles.nsf/pages/Water_a_vital_nutrient)

Below is a review of all the functions of water in our body to share with students.⁹These can be shared as a handout, or mapped onto a powerpoint presentation. Build each graphic into an animation where the image appears before the text. Ask students to share their ideas on how each of these graphics ties to a function of water in our body.

⁹Nestle Waters, accessed on 11/10/14 at <http://www.nestle-waters.com/healthy-hydration/water-fonctions-in-human-body>

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These graphics from [Nestle](http://www.nestle-waters.com/healthy-hydration/water-fonctions-in-human-body) (<http://www.nestle-waters.com/healthy-hydration/water-fonctions-in-human-body>) showcases the way water is involved in many of our body's vital functions, including:



1. Cell life

Water is a carrier, distributing essential nutrients to cells, such as minerals, vitamins and glucose.



2. Chemical and metabolic reactions

Water removes waste products including toxins that the organs' cells reject, and removes them through urines and feces.



3. Transport of nutrients

Water participates in the biochemical break-down of what we eat.

4. Body temperature regulation

Water has a large heat capacity which helps limit changes in body temperature in a warm or a cold environment. Water allows the body to release heat when ambient temperature is higher than body temperature (1). The body begins to sweat, and the evaporation of water from the skin surface very efficiently cools the body.



5. Elimination of water

Water is an effective lubricant around joints. It also acts as a shock absorber for eyes, brain, spinal cord and even for the fetus through amniotic fluid.

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➤ **Action Activity** | *A Campaign for Water: You've Got to See it to Believe it*

Sodas are in abundance and sure are tasty, so why are some cities working to ban or tax them? In November 2014, the City of Berkeley, CA (yep *that* Berkeley!) became the first city in the nation to adopt a soda tax after 30 other cities and states around the country failed, driven effectively by a citywide coalition working to mitigate the health effects linked to the consumption of these beverages (see more [here](http://www.berkeleyvvsbig soda.com/): <http://www.berkeleyvvsbig soda.com/>). A public health crisis deemed an “epidemic”, childhood obesity and Type 2 Diabetes have been directly linked to sugary drink intake. “One study showed that just one sugary drink per day increases a child risk of becoming obese by 60%. Adults who drink 1-2 servings per day are 26% more likely to develop Type 2 Diabetes than those who drink 0-1 servings per day ([learn more at www.preventobesityil.org](http://www.preventobesityil.org)).”

In hoping to reverse this trend, the California Public Health Department received a grant to develop a new campaign called [Rethink Your Drink](http://www.cdph.ca.gov/programs/cpns/Pages/RethinkYourDrink-Resources.aspx) (<http://www.cdph.ca.gov/programs/cpns/Pages/RethinkYourDrink-Resources.aspx>). The PHD also has a plethora of curriculum resources available for instructors working to cover this topic available here: (<http://www.cdph.ca.gov/programs/cpns/Pages/RethinkYourDrinkCurriculum.aspx>).

Start this lesson by sharing the information above with students, then offer the following **Facts on Sugary Drinks**¹⁰ you can frame this as a fill in the blank, fact scramble, or discussion in pairs.

- Drinks with added sugar contain extra calories and few nutrients.
- Soda is the #1 source of added sugar in the American diet.
- A 20-oz bottle of soda contains about 17 teaspoons of sugar.
- Two small juice boxes contain more sugar than 1 can of soda.
- Most 20-oz sports drinks contain about 9 teaspoons of sugar.
- Eighty percent of youth and 63% of adults drink one or more sugar sweetened beverage on an average day.
- The average 4-5 year old consumes 17 teaspoons of added sugar a day, which is approximately 65 pounds of added sugar a year.
- The consumption of sugary drinks contributes to an increased risk of being overweight and obese.
- More than half of adults and a quarter of middle and high school students in Santa Clara County are either overweight or obese.
- Obese children face a greater risk of developing health problems later in life including heart disease, type 2 diabetes and cancer.

¹⁰ County of Santa Clara, accessed on 11/13/14 at <http://www.sccgov.org/sites/scphd/en-us/residents/rethinkyourdrink/Pages/default.aspx>

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- There are many other names for sugar commonly found in beverages including: barley malt, corn syrup, high-fructose corn syrup, dextrose, fructose, glucose, lactose, maltose, sucrose, fruit juice concentrate, honey, molasses and more.

Once students have engaged with these facts, take them further with this hands-on activity.

- Have them **find at least five different drink bottles**, cartons, or pouches on campus with the labels intact.
- Ask them to **conduct some research** on each label to determine the amount of sugar in each container.
- Be sure to include one bottle of water. If they don't collect one, have one on hand to share.
- Provide each team with 5 small clear boxes (a ½ size ziplock could work as well), then:
 - Fill it with the amount of sugar in each bottle. (1 tsp = 4 grams of sugar).
 - Order the empty bottles on a piece of poster board from lowest to highest sugar content.
 - Label the drinks at the top.
 - Glue the boxes or baggies below the correct drink.
- Add any additional facts on sugary sweetened beverages they find compelling, interesting, or scary!

Voila! Your students have created a campaign for low to no sugar drinks. Create a few more of these boards and post them around campus, especially in front of the lunch line to educate their peers and other staff about the sugar content in these typical consumables.

Instructor Bonus: Sold on the negative health impacts of these beverages and ready to take action? Encourage students to take the Soda-Free Summer Pledge [here](http://www.sodafreesummer.org/sfs-join-us.php) (<http://www.sodafreesummer.org/sfs-join-us.php>).

Talk to administrators or their student government about replacing school lunch or vending machine beverages for healthy alternatives? Of equal importance is pushing for a healthy beverage policy to be adopted so this new practice can continue as your student's legacy and not simply go away once they graduate. The [Public Health Law Center](#) shares its guidance on developing such a policy here:

(<http://publichealthlawcenter.org/sites/default/files/resources/MN.healthcare.Healthy%20Beverage%20Policies%20and%20Sample%20Standards.pdf>).

In this activity, you will support students to create a poster to hang around campus to educate students about the sugar content in drinks offered at school, grocery stores, markets, restaurants and more.

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➤ **Action Activity** | *Water Taste Survey and Audit: Your School's Water Fountains*

Now that we've narrowed our focus to consuming more water than sugary beverages, let's explore more about this potable resource that has innumerable health benefits (learn more [here](http://www.cdc.gov/nutrition/everyone/basics/water.html): <http://www.cdc.gov/nutrition/everyone/basics/water.html>). Under your leadership, students will conduct a survey on campus about the look, taste, and overall student satisfaction gained from drinking water at various water fountains on campus. To complete this exercise, break students into small teams or pairs and interview one another, or ask them to ask these questions of friends/peers and report back at a later class:

1. Where do you get the majority of your drinkable water on campus (i.e. lunchroom, vending machine, fountain, bathroom sink)?

Response _____

2. Do you drink from water fountains on campus? How many times a day or week?

Response _____

3. If so, which ones do you use most frequently?

Response _____

4. Do you notice a difference between these two cups of water (one should be from a steel fountain and one from a porcelain fountain)?

Response _____

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5. What do you know notice about the water when you drink from a fountain?

Response _____

6. If there was a water bottle refilling station, would you use it? How often?

Response _____

Then have your students conduct an audit to determine the potential causes of their interviewee’s satisfaction or dissatisfaction. Have them read the [following article](http://dailyuw.com/archive/1999/04/20/imported/spilling-secrets-campus-drinking-fountains#.VJeqwXkIA) as a primer on prospective water fountain issues (http://dailyuw.com/archive/1999/04/20/imported/spilling-secrets-campus-drinking-fountains#.VJeqwXkIA) they may identify during their audit and ultimately need to address working with school site, or even district, staff.

Location	Fountain 1	Fountain 2	Fountain 3
Type of fixture (steel or porcelain)			
Type of piping? Galvanized or Copper			
Color of water when it first comes out of the fountain.			
Color after 30 seconds			
Smell of water (chlorine?)			
Taste of water (metallic? Soapy? Yummy?)			

Next, based upon the survey’s results, encourage students to use their findings to improve campus water fountains and educate their peers by:

- Petitioning for a water bottle refilling station or checking in with your local public health department to learn if they have grants available to install the stations for free.

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- Writing a memo to the District/Principal requesting your school replace any galvanized piping with copper (galvanized has a ~20 year life, copper lasts a lifetime).
- Campaigning to encourage expanded student use of water fountains as a means of reducing sugary sweetened beverage and bottled water consumption (disposable).
- Hosting a fundraiser (bake sale, electronics recycling program, get creative!) with the proceeds going to purchase a water bottle to refill for every student on campus.

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Lesson 5: Design it Bright: Super Stellar Solar

In this unit thus far, you've coached students to explore the intersection between their food choices, air quality, beverage/water consumption and their personal health. In this lesson, we'll focus on the star on the center of our solar system, our sun, and the many ways it creates bright spots for our human health (i.e. boosting our body's vitamin D supply, regulating blood pressure and heart health – explore other benefits [here](#) – (<http://www.livestrong.com/article/99858-benefits-sunlight/>).

Despite these solar-generated gifts to our skin, mood, and internal selves, the average American kid spends half as much time outdoors as the generation of kids just 20 years ago.¹¹ So if our kids are moving, and staying, indoors, how can we ensure this generation receives the same benefits this supporter of all life on Earth (thank *you* photosynthesis!). One answer quickly surfaces when exploring the way we design our buildings and with the advent of a new term for your students – “daylighting.”

The Whole Building Design Guide, a program by the National Institute of Building Sciences, shares that “daylighting is the controlled admission of natural light, direct sunlight and diffuse skylight into a building to reduce electric lighting and save energy. By providing a direct link to the dynamic and perpetually evolving patterns of outdoor illumination, daylighting helps create a visually stimulating and productive environment for building occupants, while reducing as much as one-third of total building energy costs.”¹²

Through the next series of activities, students will explore how building design, siting, and orientation can ensure that this “[no child left inside](#)” (<http://www.cbf.org/ncli/landing>) generation isn't completely vitamin D-deprived and schools can harness the sun's potential to improve student performance and development (learn more [here](#): <http://www.nrel.gov/docs/fy00osti/28049.pdf>).

¹¹ National Wildlife Federation, accessed 12/21/14 at <http://www.nwf.org/be-out-there/why-be-out-there.aspx>.

¹² Whole Building Design Guide, a program of the National Institute of Building Sciences, accessed 12/22/14 at <http://www.wbdg.org/resources/daylighting.php>

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➤ Discussion Activity | *Maximizing Daylight in Buildings*

Using the above information for background, [watch this video](https://www.youtube.com/watch?v=2M1EfhIGPkI) (<https://www.youtube.com/watch?v=2M1EfhIGPkI>) as a class, which offers a series of tips on how to harness daylighting design to create sustainable buildings and healthy occupants. Following the video, ask students the following questions to discuss in small teams or pairs. Groups will report back to the class.

1. Do most buildings offer access to daylight? If not, why?
2. What are some common daylighting designs? How/where are they installed? What are the benefits of daylighting?
3. Is your school designed with daylighting features?
4. How do you feel in a building with a lot of daylight versus a building with little or no daylight? Provide examples on campus or in the community.

➤ Action Activity | *Body Solar Exercise- 10 Minutes*

The Body Solar exercise is designed to help students understand how, at various times of the year, the sun is at varying levels in the sky (i.e. it rises a little bit South East in the winter and a little bit North East in the summer). The varying height of the sun over the southern horizon lets in more light in the winter to help with heating a building or home. Conversely, if there is proper shading (trees or awnings) the sun won't directly enter a building or home and will naturally provide a cool environment during the summer.



This exercise is based on the work of [Dave Deppen](http://designwithnature.net/) (<http://designwithnature.net/>), an instructor, architect, planner and key designer of the [Kirsch Center](#) for Environmental Studies

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(<https://www.deanza.edu/kirschcenter/>) at De Anza College in Cupertino, CA,¹³ the first [LEED](http://www.usgbc.org/leed) (Leadership in Energy & Environmental Design - <http://www.usgbc.org/leed>) Platinum community college campus building in the United States.

Activity steps include the following:

1. Lead students outside to a south entrance of the school building. Here, students will use their hands to follow the three paths of the sun during four different times of the year.
2. The sun is at its highest point of the day during noon time. The exact sun angle height will vary depending on an area's latitudinal position. We are situated on a circle of latitude called the 37th parallel north, because it is 37 degrees north of the equator.

Part 1: Noon Sun Angle Height on the 37th Parallel

Instruct students to stand facing south with two arms-lengths in between them and one arm length in front of them. Once in their positions, students will stretch their one arm out in front of them to represent the sun's noon angle height during four different times of the year.

Their plane of measurement will be from 0 degrees ground-level to 90 degrees straight above. Students will start with December 21 and cycle through a complete one year cycle. We start with the shortest day with the lowest sun angle, December 21 and show that the days get longer until they peak on June 21, the longest day with the highest sun angle. After June 21 the sun angle and day length decrease until they reach their lowest point back at December 21.

The following diagrams are provided to help you coach students through the exercise:

Side profile.



1. Facing South: Instruct students to raise their hands up 1/3 of the way up from the ground: December 21, Winter Solstice: On December 21, the shortest day of the year, the sun is exactly 1/3 of the way up from the ground, 30 degrees.



2. "January, February...." Instruct students to raise their hands almost 2/3 of the way up from the ground: March 21, Spring Equinox: On March 21 the sun's noon angle height is 59% of the way up from the ground, 53 degrees. The days have gotten longer since December 21

¹³ Campus as a Living Lab Module: Green Building Design and Environmental Health and Justice, De Anza College

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3. "April, May...." Instruct students to raise their hands almost 9/10 of the way up from the ground: June 21, Summer Solstice: On June 21 the sun's noon angle height is 86% of the way up from the ground, 77 degrees. This is the longest day of the year, with the highest noon sun angle height. From this point the days will slowly get shorter. "July, August..."



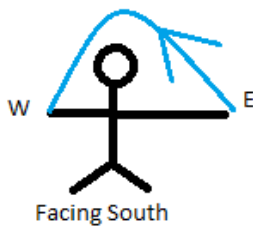
4. Instruct students to bring their hands back down to 2/3 of the way from the ground: September 21, Fall Equinox: September 21 has the same noon angle height as March 21, 53 degrees, 59% of the way up from the ground. The days will continue to get shorter. "October, November..."



5. Instruct students to lower back down to 1/3 of the way off the ground: December 21, Winter Solstice: We are back to the shortest day of the year, December 21, with the lowest noon sun angle height, 30 degrees, exactly 1/3 off the ground.

Part 2: The East-West Path of the Sun on the 37th Parallel:

Now we will use our hands to follow the east-west path of the sun as it rises and falls during the same four times of the year.



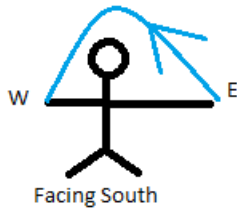
1. Instruct students to start with the left hand directly to the east. Moving laterally have student bring their right hand forward 1/3 of the way toward south:



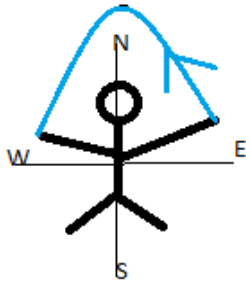
Facing front (South)

2. Instruct students to start with their left and right hands exactly to the east: December 21, Winter Solstice: The "east" rising starts with the right hand 1/3 of the way toward south, rises up and forward 1/3 of the way off the ground to the noon angle height of 30 degrees, and then sets on the "west" 1/3 of the way south.

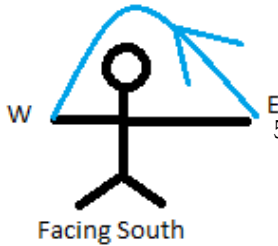
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3. "January, February..." March 21, Spring Equinox: With the left and right hands exactly at east, bring the right hand up to almost $\frac{2}{3}$ of the way up from the ground in front of us, for the noon angle height of 59% off the ground, 53 degrees. Bring the hand down to set on exactly west.



4. "April, May..." Instruct students to bring their hands to east and move their left hand laterally to $\frac{1}{3}$ of the way north, slightly behind them. June 21, Summer Solstice: Starting with the hand $\frac{1}{3}$ of the way north, the "east" rising begins. The right hand moves up to almost $\frac{9}{10}$ of the way up straight above us for the sun angle height of 86% of the way up, 77 degree. As the sun sets to the "west" right hand comes down $\frac{1}{3}$ of the way toward north.



5. "July, August..." September 21, Fall Equinox: Again with the hand starting in the east, we bring our hand up to almost $\frac{2}{3}$ the way up from the ground in front of us, and then back down to set on exactly west.



6. "October, November..." December 21, Winter Solstice: We again raise our hands up to $\frac{1}{3}$ of the way off the ground in front of us, and back down to our right $\frac{1}{3}$ of the way south.

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Lesson 6: Growing Greener: Bike, Walk, Win

Now that students understand how food, water, and the sun can “fuel” their personal health, we’ll explore ways they can cut their fossil fuels by choosing an alternative commute to school that can achieve great environmental (i.e. reduced carbon dioxide), roadway (i.e. reduced congestion), and health (i.e. increased physical activity) benefits. A sampling of the personal and communitywide benefits resulting from increased resident and student biking and walking include:

- 1. It’s fun!** Riding bikes is an instant endorphin booster. It’s freeing to feel the wind on your face and smell the fresh-cut grass as you pedal past homes. It makes you thankful that your legs are strong enough to ride a bike — because some days we forget that others can’t.
- 2. It’s good for the environment.** Trading your gas-guzzling vehicle for your own little legs is a simple way to help the environment. Start with once a week. Pick a day and make it bike riding day and explain to your parents why you are choosing to do this.
- 3. It’s exercise.** 1 in 3 American children are overweight¹⁴. Screen-time has replaced playing outdoors and we need to get these kids moving! By riding a bike or walking to school, the whole family gets exercise (if your parents opt to join you 😊).
- 4. It helps the community.** The fewer cars on the road and jamming the drop off/pick up line at school helps everyone. With elevated use of bike and pedestrian infrastructure (i.e. sidewalks, paths, traffic calming measures), comes improvements to these systems that can increase home values (checkout your City’s Bike Plan! (Cupertino’s is available [here](http://www.cupertino.org/index.aspx?page=1047): <http://www.cupertino.org/index.aspx?page=1047>)). Biking and walking to school can encourage others to follow your lead (i.e. as a form of peer-pressure).
- 5. It builds safer streets.** The National Center for Safe Routes to School notes that “communities with higher rates of walking and bicycling tend to have lower crash rates for all travel modes. One reason may be that motorists drive more cautiously when they expect to encounter walkers and bicyclists. More walkers and bicyclists can also improve personal security by providing more “eyes on the street.”¹⁵
- 6. It saves money.** Every time you opt out of driving your car, you save money. It’s estimated that it costs between 20-30 cents per mile to operate a car, so you might save \$3 a week biking just to school (which is almost equivalent to a coffee date at Starbucks). If you

¹⁴ American Heart Association, accessed 12/03/14 at http://www.heart.org/HEARTORG/GettingHealthy/HealthierKids/ChildhoodObesity/Overweight-in-Children_UCM_304054_Article.jsp#

¹⁵ Walk and Bike to School, accessed 12/21/14 at <http://www.walkbiketoschool.org/ready/why-walk-or-bike/community-benefits>

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rode bikes to school for an entire year, you might save \$160. It's not a ton of money, but it is something!

Learn more specific benefits of walking and biking to share with your class, or fuel a research assignment, on the [Federal Highway Administration's page](http://www.fhwa.dot.gov/environment/bicycle_pedestrian/resources/data/benefits_research.cfm) dedicated on the subject (http://www.fhwa.dot.gov/environment/bicycle_pedestrian/resources/data/benefits_research.cfm).

After researching these benefits, chat with students about why they perceive their classmates don't bike or walk to school. You'll likely find some common themes. In any town, in any country, on any continent, students most likely find it difficult to bike or walk to school because a diversity of reasons, including, but not limited to:

- It's too far.
- I don't have the right clothes. .
- My parents drive me so I don't need to bike.
- My bike needs to be fixed.
- I don't like showing up to class sweaty.
- It's too cold.
- It's too hot.
- My backpack is too heavy.

While these are all valid reasons, encourage your students to rethink these perceived challenges of biking and walking – one by one. Here's a template for you to brainstorm ideas with your students on how to “cool” their commute (**Instructor bonus:** *lead by example by walking/biking to school – bring your bike or helmet into your classroom as a statement to students that you literally walk/ride the talk ☺*).

Reason for not biking	What you can do
It's too far.	Biking is easier than walking. Time yourself on the weekend. Ask your mom or dad (or both) to come with you. 2-3 miles of biking might take you 10-15 minutes.
I don't have the right clothes, and if I did, I wouldn't want to wear them to school ☺	Even girls can find chic biking clothes. You don't have to skip out on fashion to bike. Just be sure to get a sturdy helmet. Bike a few times a week and leave a couple days for dresses and cute shoes.
My parents drive me so I don't need to bike.	Perhaps you could save your parents some gas and they could take another route if you biked (<i>possible allowance bonus?</i>)
My bike needs to be fixed.	Your school may offer a bike safety and tune-up day. Check it out and get it fixed.
I don't like showing up to class sweaty.	Leave enough time so that you aren't rushing. Get started a little earlier and you should have plenty of time to enjoy the ride to school.
It's too cold.	Bundle up but of course avoid those really frigid days. A hat under your helmet and gloves help a lot and work for most cold California days.
It's too hot.	What better way to cool off than to ride into the wind.
My backpack is too heavy.	A few times a week, perhaps you can lighten your load so that you can ride.

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➤ **Bike Survey Activity** | *Students and Staff –No excuses*

Changing behavior (i.e. getting your peers to walk and bike vs. getting dropped off) at your school requires that you first understand the behavior. From the scavenger hunt conducted earlier through green@school, students have an approximate number of their peers that bike to school. What percentage is that? 3%? 6%? 10 %? What percentage do they think would make a substantial difference in drop/off, pick/up traffic times, and vehicle-tied greenhouse gas emissions?

In seeking to address this question, students must find out about their peers and staff's commute habits and a great place to make that happen is by surveying these individuals directly. Here is a start at some questions for you to help them launch this exercise. Add more if students are generating additional questions and ideas – harness that energy! We recommend you administer the survey at lunch every-day during a single week to get as many responses as possible. Afraid no one will participate? Provide the students with a ticket for a special prize at a bike safety rodeo (described below) offered by your school. (Be sure to speak with your administration about the time and dates for the next bike rodeo and safety show. They usually occur at the beginning of the year.) Think of a handy, affordable, bike accessory and see if the PTA can support the cost. Not hosting a bike rodeo? Keep it simple – think free baked goods, or a gift card to a local business who might be willing to donate to your worthy cause!

Proposed Survey Questions:

1. How did you get to school today?
Response _____
2. If you biked, how long did it take you?
Response _____
3. How far do live from school?
Response _____
4. If you didn't bike, why not?
Response _____
5. Would it be helpful if there was a walking group in your neighborhood?
Response _____
6. Would it be helpful if there was a biking group in your neighborhood?
Response _____

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➤ **Action Activity** | *Bike Rodeo, Safety and Tune-Up Campaign: Remove Barriers to Biking*

Find out if your school or district will support hosting a bike rodeo where safety measures are reviewed, helmets are inspected, on-site bike tune-ups are offered, and local police are present to discuss safety and how to have fun on your bike. If so, work with your students to coordinate a bike show, hold safe and fun competitions, give away prizes and announce a new incentive plan. Prizes could include:

- Bike accessories like a water bottle holder, bell, or decals.
- First prize could even be a new bike.



**BIKING IS
THE NEW
DRIVING**

A note to instructor's: In the City of Cupertino, our City hosted its first annual Bike Rodeo in October of 2014 (see: <http://www.cupertino.org/index.aspx?recordid=1168&page=26>). Consider connecting with the City's Bicycle Pedestrian Commission to see if you could co-host the event, or perhaps gain some tips from the City's experience hosting its previous events if you elect to host a rodeo on your campus (<http://www.cupertino.org/index.aspx?page=51>). Your local sheriff's office (<http://www.cupertino.org/index.aspx?page=89>), public health department (<http://www.sccgov.org/sites/sccphd/en-us/Residents/Traffic%20Safety/Pages/Safe-Routes-to-School.aspx>) and/or bicycle coalition (<http://bikesiliconvalley.org/>) would also be worthy partners with great resources to share with attendees at your event.

UNIT 6: Health & Wellness

➤ **Action Activity** | *Walk One Week: Get Your School and the Broader Community Involved*

Why walk one day when you can WOW! This program was launched by the e-Club at Lawson Middle School, in partnership with the Cupertino Teen Commission, to motivate students to walk to school more frequently by encouraging them to give it a try for a single week, filled with great prizes and rewards for participating. To date, eleven elementary and middle schools have participated in this annual event, but they're actively recruiting new schools to join this campaign to transform student commutes. Encourage your students to learn more about WOW by reviewing the following resources:

- <http://www.ourgreengalaxy.org/activities.php>
- <http://www.greenchipmunks.com/Home/wow/wow-california>
- <http://www.greenchipmunks.com/Home/wow/wow-california/wow-kit>
- <https://www.facebook.com/video/video.php?v=1399272750821>

Other ideas on how to kick off a student ride/walkathon?

- Have students connect with their Teen Commissioners to learn what's involved in organizing a WOW event and help them get a head start on coordinating and recruiting participants for your next school year.
- Also recommend they connect with the Public Health Department's Safe Routes to School Program (Santa Clara County's program is called [Walk and Roll](#) – (<http://www.sccgov.org/sites/sccphd/en-us/Residents/Traffic%20Safety/Pages/Safe-Routes-to-School.aspx>)).
- While they're at it, be sure students [register your school](#) for Walk or Bike to School Day (<http://www.walkbiketoschool.org/ready/about-the-events/bike-to-school-day>). This website provides all the details including campaign posters, instructions on how to hold an event and lots of other great resources.



UNIT 6: Health & Wellness

Lesson 7: Getting Green Done: Influence Peers, Staff, Family, Community

As these lessons have introduced to students, transforming your campus into a healthy, well and energized learning environment can take time and effort. Here are a few ideas noted throughout this unit to jumpstart health and wellness at your school and in your community. Work with students to start a campaign to advance this work and help them see their ideas implemented at their school before they graduate!

- Install an organic vegetable garden (*Cupertino note: Rotary can help www.CupertinoRotary.org*)
- Plant a native plant garden (*Cupertino note: Rotary can help www.CupertinoRotary.org*)
- Launch bike sharing for staff on campus (*Cupertino note: sustainability@cupertino.org can help*)
- Develop a bike/walk incentive program (*Cupertino note: www.boltage.org in some schools*)
- Offer Staff wellness programs
- Organize staff/student competitions
- Create motivating signage/ video campaign
- Employee CSA Program
- Install a water bottle refilling station
- Start a lunch option petition