



OXYGEN
Essential for Life

Master of Arts: Thesis Studio

Title: Oxygen, Essential for Life
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Research Goal

It is important to know that graphic design is a strategic method of communication and concept development. The transitional phases those logos went through developed new trends as years went on. Because logos are vital components to all businesses and organizations, their designs need to reflect the public image those businesses want to portray. Logos tell the public who the company is and what they do, and they are the one constant of a corporation's visual presence. Logos can be placed anywhere, from letterhead to large-scale banners on the side of a building. When a logo is designed well and communicated clearly, the business will begin to establish a public identity. This identity can represent a product or a mission, as is the case with non-profit organizations.

In researching corporate identities from the past 100 hundred years, I found that techniques for designing logos have changed drastically. When I created the section of *Old Style Logos* in my research, I realized that the most logos were either done by hand or with minimal technology. Compared to the numbers of styles that were produced from the 1880s-1980s, trends in logo design have tripled today. While technology may have changed the process of logo design, the way these icons communicate and interact with society have not.

Research Overview

For years preserving our *oxygen* has been a constant battle around the world, but little action has taken place to really stop how air and water pollution affect our environment. I feel that the subject of branding the element *oxygen* is feasible for investigation, because the threat to our air is a universal problem crossing cultures and atmosphere. When researching oxygen, I found out that many organizations explored the larger issue of environmental, but none of them have effectively communicated through their advertising what's at stake if oxygen is not considered within the context of the larger environmental discussions.

Summary of Research Findings

Air Pollution:

Air pollution is predominately emitted through the air exhaust of motor vehicles and the combustion of fossil fuels. The biggest cause of air pollution is use of transportation. Cars can be more efficient but there are too many of them, ultimately diminishing their efficiency (Buchanan 5). According to the U.S. Department of Transportation Statistical Records Office there are approximately 143,781,202 on the road today. One solution to the problem is to get people to carpool, which could reduce the number of cars on the road and in turn

reduce the amount of pollutants (Buchanan 5). A second solution is to make more laws enforcing more efficient cars (Buchanan 5), but until vehicle volume and efficiency are addressed on a global scale, damage to the environment will continue to escalate.

The combustion of fossil fuels is the other leading cause of air pollution. Although the amount of pollutants these factories emit has reduced since the 1950s (coal was the primary source of energy), they still release a large quantity of dangerous gases (Buchanan 5). For example, carbon monoxide (CO₂) comprises 56% of all air pollutants when looked at in terms of total mass (Buchanan 1). However, when looked at in terms of effect, CO₂ makes up only 2.5% of the pollutants (Buchanan 1). In contrast, hydrocarbons make up 13% of all pollutants when looked at in terms of mass but that number jumps to 71.5% (Buchanan 1). While more standards can be enforced to reduce the emissions of these factories, regulations have not been mandated. The reliance on alternate energy sources may not be the answer either, because they may not have environment-beneficial. For example, nuclear fuel releases more pollutants into the air than the combustion of oil and coal combined.

Water Pollution:

Water comprises over 70 % of the earth and is the most precious natural resource that exists on our planet (Krantz and Kifferstein 1). Despite that humans recognize the importance of water survival, we disregard this fact by polluting our rivers, lakes and oceans. Water pollution is the result of industrial waste and environmental accidents. Among its affects are poisoned drinking water, deforestation from acid rain, food and unbalanced river and lake ecosystems that can no longer support full biological diversity.

Application of Research

Concept:

The concept for my thesis is to design public awareness campaign to promote oxygen where I would take the historical trends I discovered in logo design and apply them in a contemporary manner. The identity for the oxygen campaign, had to be simple so that the public could understand the message immediately, because people are accustomed to seeing large, abstract, colorful advertisements. To reach a diverse audience, advertising also must utilize different mediums. When coming up with a plan of action I focused on two different points of view: My perspective as the designer, and that of the

non-designers, who was my audience. My next step was to consider how to develop a campaign for such a broad demographic. What is the best method to communicate to the public? Who is the target audience? And how can I make this campaign different from other campaigns? In answering these questions from multiple vantage points I hoped to narrow down my choice of medium.

Challenge:

In developing the logo for *Oxygen, Essential for Life*, my strategy is to take all that I have researched about logos and their techniques and incorporate them into a logo(s), that best represent the importance of our environment in an awareness campaign. My intentions are to not replicate what has been done already, but to reinvent new combinations of techniques to create a powerful, well-designed logo. Designing a logo for the *oxygen*, is incredibly difficult, because its so vital to all of us, yet it intangible. Because the element oxygen is transparent and moves around us, those aspects have to be considered into the design of the logo. The creative design strategy will be to draw in the public using striking visuals that not only attract, but also in their very composition, create awareness.

Process:

When designing a logo for an entity such as oxygen, the process of communication is crucial. Knowing how oxygen works, what it looks like and how it is used is key to creating a clear message in order to brand it. The answer to these questions has to be applied to the design of the logo, so that branding is considered from every angle. A logo for oxygen needs to have movement, and be partially invisible to evoke the essence of the element as a product. Once the logo is designed with these criteria in mind, the next step would be designing deliverables to get the word out.

Application:

The focus for my thesis is to take what I researched and apply the trends and techniques to logo(s) that would describe my subject, the element, *oxygen*. This campaign is going to touch upon every factor about oxygen and how necessary it is to the planet. Day in and day out, oxygen is consistently moving around us. Without oxygen, every living breathing species on earth would die. This is why protecting this element of our environment is so crucial.

My ideas for designing this campaign took a three-step process: two-dimensional (magazine advertisements, informational packet), three-dimensional (environmental kiosks, and street banners) and also multi-media, including

a website. The reason for designing across mediums is to reach out to a broad range of consumers, considering their lifestyles, resources and culture. For example, some people might not own a computer; therefore, they must be reached using two and three-dimensional mediums. Knowing what people are looking for and how will they be able to view the campaign, is key to its success.

My campaign for oxygen would focus on events where I can reach my primary demographic. For example Earth Day, the biggest environmentally focused event in America, is a great way of getting the word out about the “Oxygen, Essential for Life” campaign to the people who will most likely respond to the message. I would create info packets to be distributed at Earth Day that describes ways to preserve the environment by fostering an understanding the importance of oxygen. The packet would be designed using recycled fiber paper, which reinforce environmental awareness through the use of natural materials that are biodegradable. Also, the campaign will include a take away of miniature trees that people can plant. Therefore the take away makes the impact that individuals can have on the environment, more tangible. The plants and fresh soil will be in cased in small, recycled plastic tubes, which are easily reusable, and are sealed with recycled mineral corks. Because trees and plants give off tremendous

amounts oxygen, the more we plant the more fresh oxygen is released into the air. The very action itself of planting not only creates answers by getting the public involved but also the added benefit of offsetting the problem of oxygen depletion.

Conclusion

The rapid evolution of corporate identities creates a whole new range of ideas and possibilities for logo design in the future, which I intend demonstrate through my Oxygen Campaign. With my passion for identities and branding and knowing that change is inevitable, I have come to a conclusion that corporate design is a never-ending process and a company’s visual representation is the core foundation of any businesses.

Logos are core elements of a business' identity.

Historically, the tools for creating them did not allow for much variation, so there was little impetus for change.

Because the tools were limited, logos had to be simple and were often long lasting, usually representing the company iconically for years.

However, the contemporary corporate logo can no longer be static, because technology keeps changing. Therefore, a constant revision and reshaping of corporate identities is now required in order for companies to be competitive from a branding perspective and keep pace with the sophisticated 21st century consumer.

Before beginning the most crucial portion of my thesis –
The studio work – I needed to do additional research and
answer a few questions...

- What is my intention?
- What type of audience am I trying to reach?
- What are the best ways of conveying my message to
the public?

All these questions and more research on oxygen are extremely
important before diving into the studio work. Designing
an environmental campaign for Oxygen is a large task.
Before designing the deliverables a logo(s) was needed to
communicate the importance of oxygen, to embody the feel
and movement of oxygen and to address how it affects life.
Illustrating the movement of oxygen was imperative to defining
the style of the logo. Although oxygen cannot be seen, it cannot
be contained within any object. This element is a crucial part to
this entire design process.

The Oxygen awareness campaign is designed as a catalyst for
people to take action on the environment that will move them
forward in their understanding of how important the air is
that we breathe.

Logo Concepts

5/30/2007



6/5/2007



6/15/2007



6/29/2007



Logo

Oxygen, Essential for Life

Abstraction

Oxygen, Essential for Life is the primary version of the logo.

Essential Air, Essential Earth, Essential Plants and Essential Water are the alternate versions used to convey the various ways oxygen is important. Earth-tone colors, identity transformation and the motion of oxygen molecules are incorporated into all the marks.

New Design: Logo

Starting with the Illustration, the O is designed to have a solid color at the bottom or at one end and fade gradually to the other side to give the impression of how colorless oxygen is. The two arms extending at both ends of the "O" to show the oxygen balancing of Life, Air, Earth, Plants, and Water. The number 2 signifies the two molecules that form the element oxygen. The Title Oxygen, underneath the illustration because it is unique and it also is in a font called V-Dub, the reason I chose this font was to connect with the illustration above to show the curvature of the lines. The sub-title is written in Optima. The subtleness of this font gives off a connection that ties into entire mark. The last word in the sub-title in the logos is either, Life, Air, Earth, Plants or Water, is highlighted in the color of the illustration to let people know what area of oxygen they are focusing on.



Logo

Back and White



Logo

Scaled



Magazine Advertisement Concepts

5/30/2007

Oxygen is not only an element on the periodic table but it is key to life on earth. We need oxygen to survive. Without oxygen, every person, plant and animal on earth would die.

Day after day toxic fumes from industries that burn fossil fuels all over the world are decreasing the percentage oxygen that we can breathe. Dropping waste into our rivers and oceans also depletes our oxygen. Every time we breathe in toxins in the air or drink them from our faucets, our health is at risk.

If you would like to learn more about OXYGEN, and ways to protect our natural resources please visit our website at www.o2oxygen.com.

3

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Need Direction? Discover OXYGEN

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Need Direction? Discover OXYGEN

3

Magazine Advertisement

Abstraction

The concept for magazine advertisements was simple. The contemporary consumer responds well to image-heavy advertisement; therefore replicating that formula ensures the design will have an effective impact. Having a series of four different advertisements with powerful, oversized visuals gives the audience a deeper understanding of what this campaign is all about.

New Design: Magazine Advertisements

In a series of magazine advertisements, the objective is to make them look distinct, yet connected. Each of the earth-tone colored bars borders the top and bottom of the page, leaving the reader focus on the importance of the subject. The earth-tone colors are echoed in the logo design. The headline line reads Discover Oxygen, Essential for Life, The font used was selected because it has an environment feel. The large image in the center of the spread is simple and evokes purity. Each image is a visual representation showing the reader where oxygen exists on earth, and how vital it is to keep it pollutant free. The most important design element of the magazine advertisement in this is campaign is the curved lines that run throughout the spread. These white, almost invisible lines represent the movement of oxygen. On the cross section of the lines, an O₂ symbol is positioned give the effect of two molecules forming. In the lower right side of the spread, is a brief description of how important oxygen is, and what this oxygen campaign is all about. The advertisements are printed on recycled fiber paper to reinforce the importance and awareness of protecting the environment.

Headline



Oxygen Movement



Description of Oxygen and Campaign



Discover Oxygen! Essential for Life



Oxygen (O₂) is not only an element on the periodic table...It's key to life on earth. We need Oxygen to survive. Without Oxygen, every person, plant and animal on earth would die. Day after day toxic fumes from industries that burn fossil fuels all over the world are decreasing the percentage of Oxygen in the air we breathe. Dropping waste into our rivers and oceans also depletes our Oxygen. Every time we breathe toxins in the air or drink from our faucets, our health is at risk. Learn more about Oxygen, and how to save our planet, visit us at www.o2oxygen.com.



Discover Oxygen! Essential for Life



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Learn more about Oxygen, and how to save our planet, visit us at www.o2oxygen.com.



Magazine Advertisement

Essential Plant

Discover Oxygen! Essential for Life



Oxygen (O₂) is not only an element on the periodic table...It's key to life on earth.

We need Oxygen to survive. Without Oxygen, every person, plant and animal on earth would die.

Day after day toxic fumes from industries that burn fossil fuels all over the world are decreasing the percentage of Oxygen in the air we breathe. Dropping waste into our rivers and oceans also depletes our Oxygen. Every time we breathe toxins in the air or drink from our faucets, our health is at risk.

Learn more about Oxygen, and how to save our planet, visit us at www.02oxygen.com.



Discover Oxygen! Essential for Life

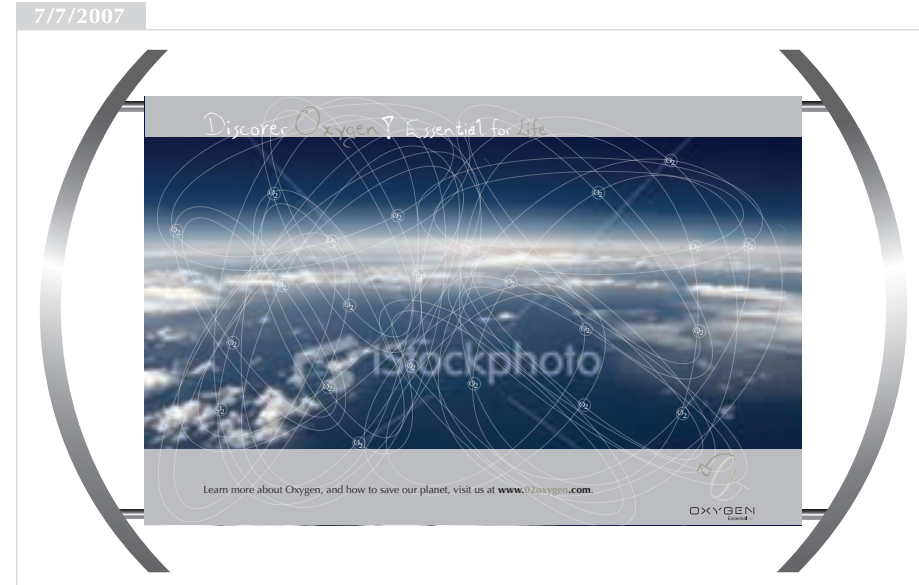
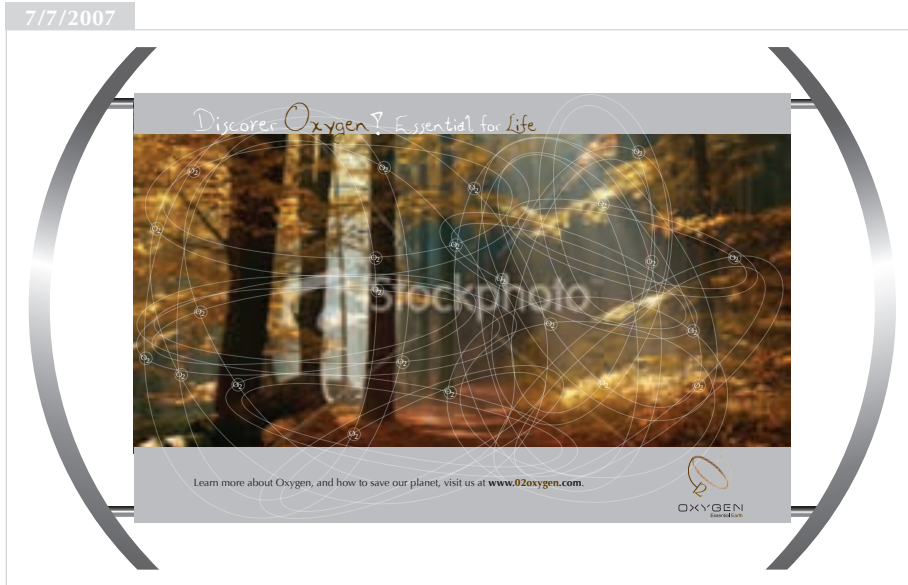


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Environmental Kiosks

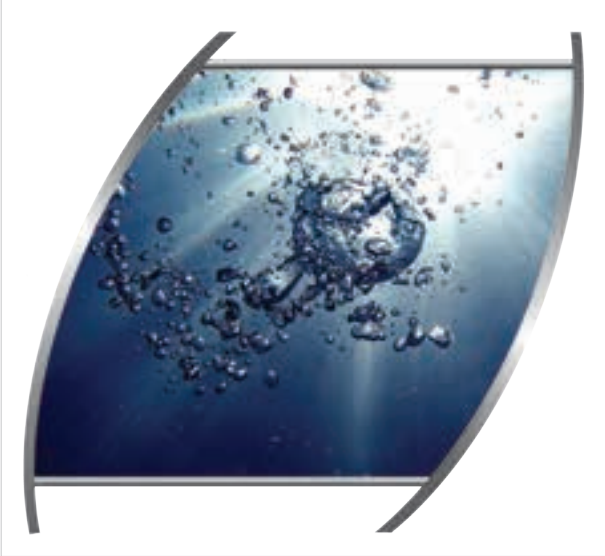
Concepts



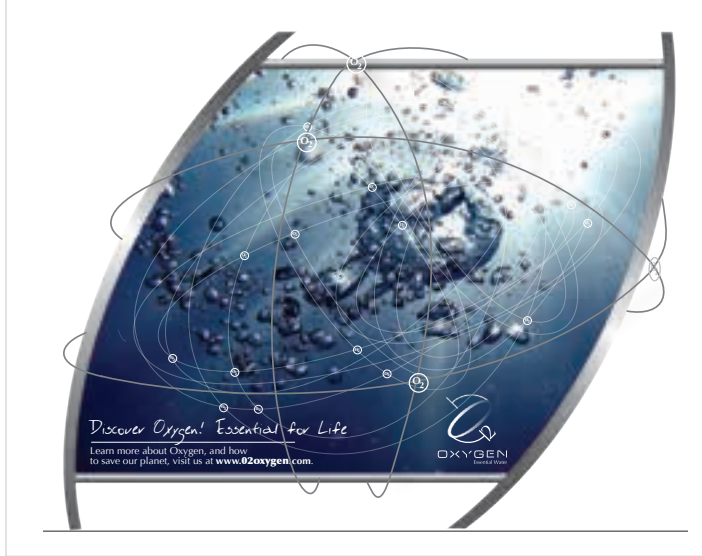
Environmental Kiosks

Concepts

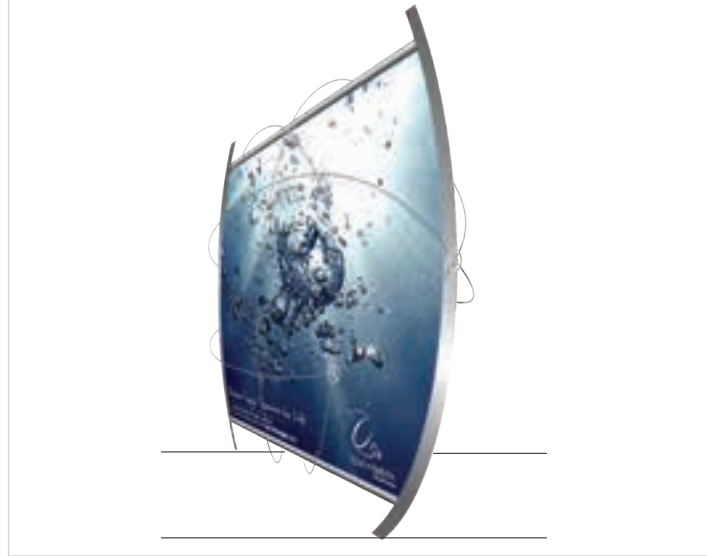
7/16/2007



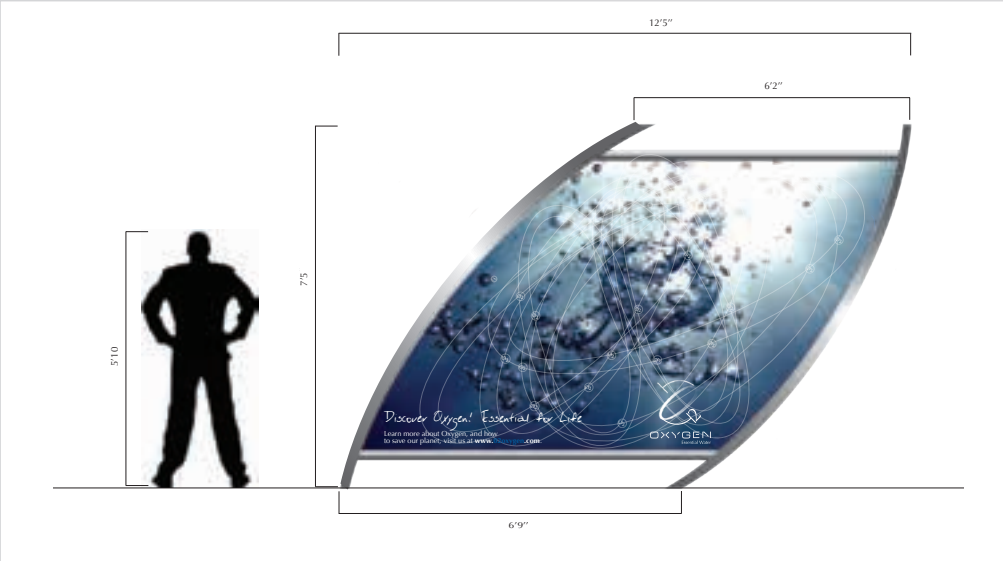
7/16/2007



7/16/2007



7/18/2007



7/18/2007



Environmental Kiosks

Abstraction

Environmental kiosks are a great key for communicating a message to the public, especially in an urban city where this is a high percentage of pedestrians. On daily walks on the street kiosks need to be memorable to not only make the stop, but also leave the public with a lasting impression of the product.

New Design: Environmental Kiosks

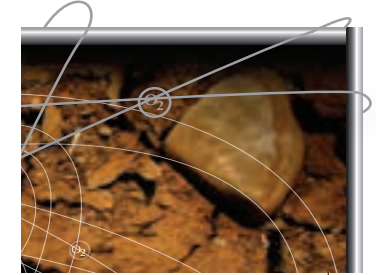
To make these kiosks stand out from other billboards, the idea of was make the audience want more. With this idea in mind, three small size kiosks would be used to draw the possibly in and lead him or her to the main larger kiosks, that supply the information about the Oxygen campaign. The smaller, slender kiosks display quick-facts about our environment and ways to keep it clean and safe. These introductory kiosks use a cropped image that the viewer can see full-scale in the larger kiosks at the end. The images show where oxygen exists in specific location on earth. The kiosks are made out of recycled metal and the information and images are printed on vinyl so they it can be reused. On the top of these small kiosks is a dye-cut of the logo, so that the kiosks can be seen from afar and also to reinforce that oxygen cannot be contained.

The larger kiosk that comes at the end of the trail of the three smaller kiosks reflects the design of the magazine advertisements, reinforcing the entire branding campaign consistent. The larger kiosk is unique from the others preceding it. Recycled metal wiring wrapping is utilized around the kiosk frame to show the movement of oxygen in a three-dimensional way.

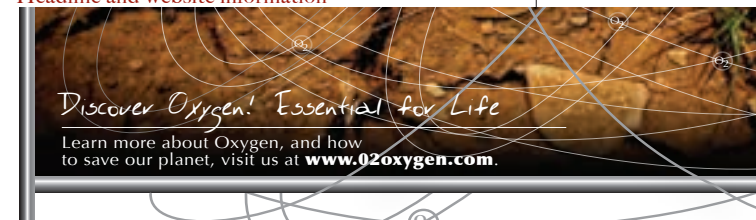
Design Placement: Environmental Kiosks Placement

The placement of these kiosks is critical. The kiosks need to be placed in locations where it will gain plenty of respect for the environment and will make a significant influence on the public. I propose to place the kiosks in the Boston Public Garden, because it is already dedicated to preserving nature. This will be an ideal location to encourage public understanding of how valuable resource oxygen is.

Recycled wire wrapping



Headline and website information



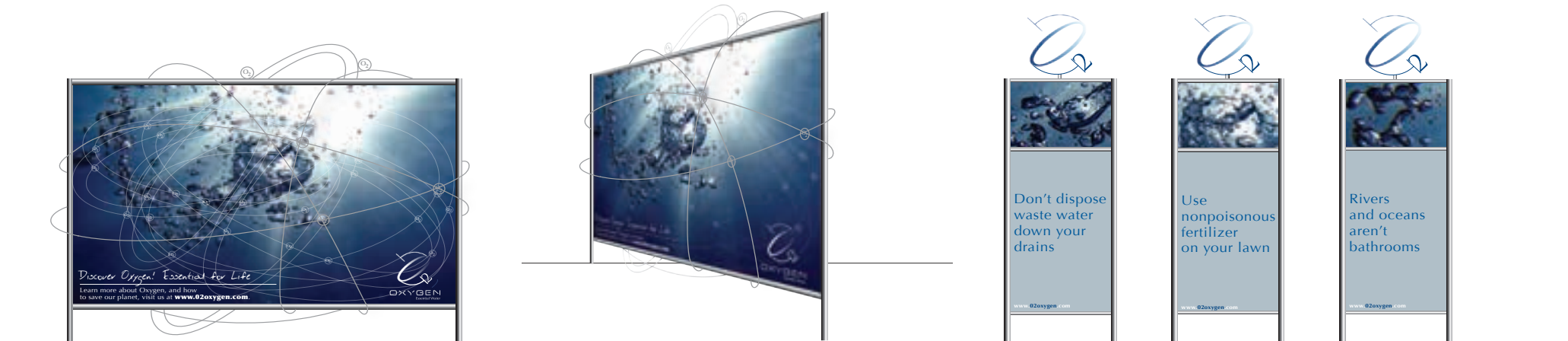
Environmental Kiosks

Essential Earth



Environmental Kiosks

Essential Water



Environmental Kiosks Placement

Boston Public Garden



Environmental Kiosks Placement

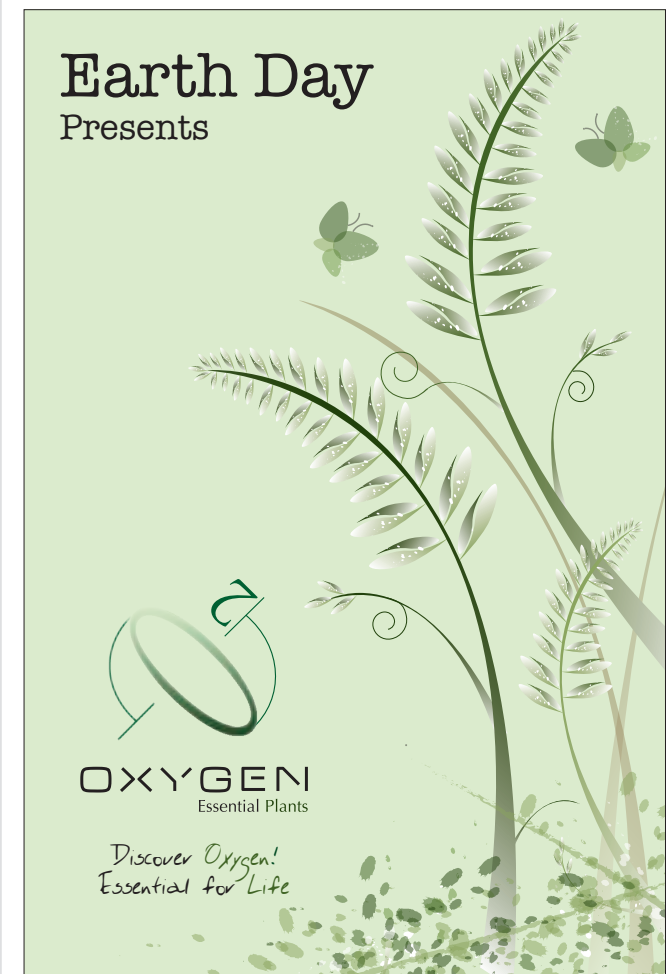
Boston Public Garden



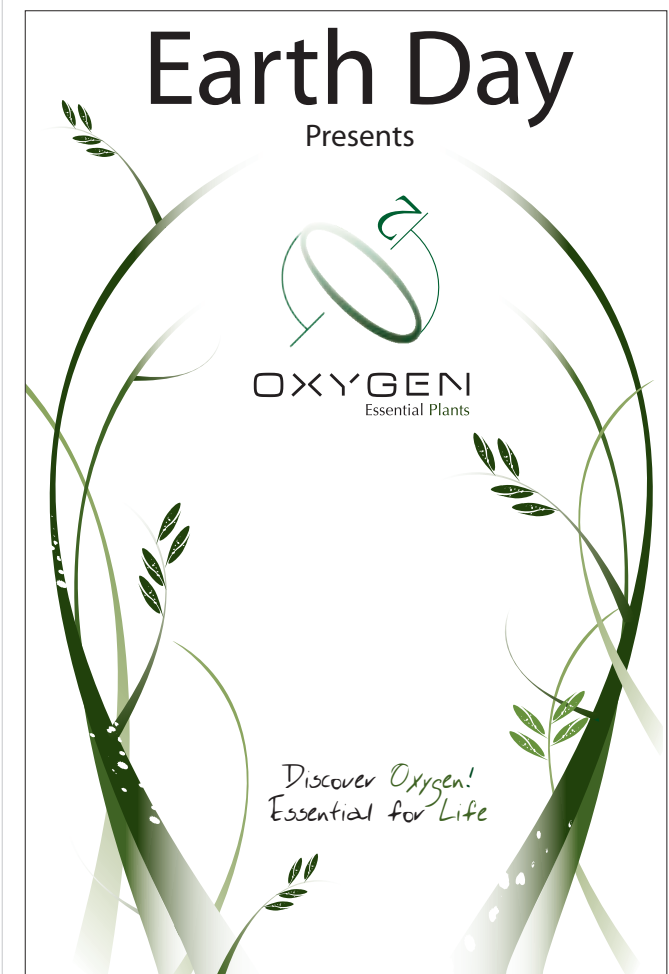
Environmental Street Banners

Early Development

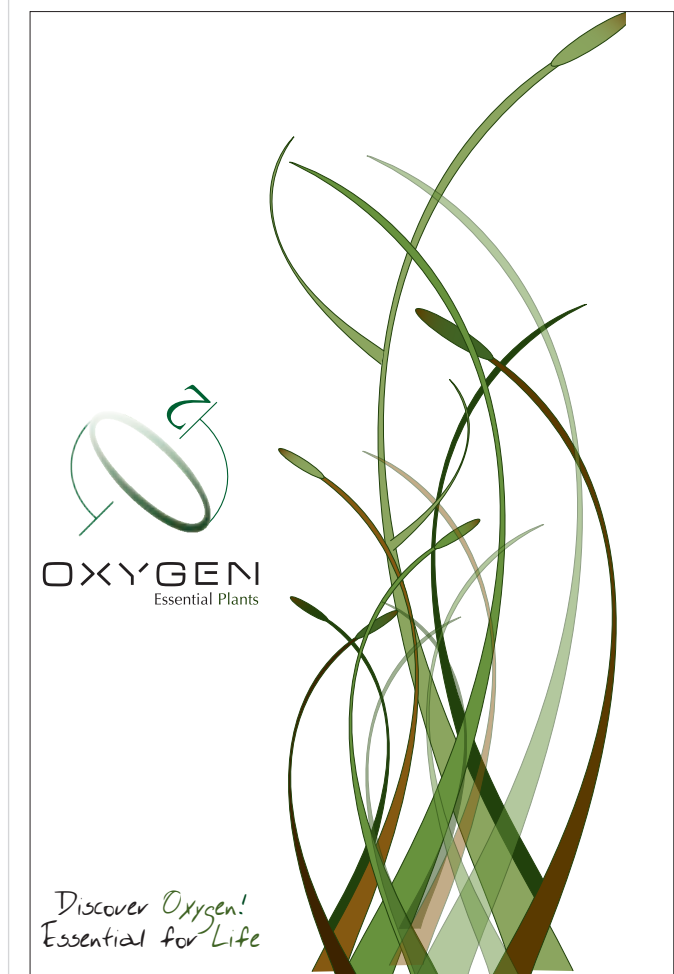
7/24/2007



7/24/2007



7/24/2007



Environmental Street Banners

Concept

7/25/2007

OXYGEN
Essential Air

OXYGEN
Essential Earth

OXYGEN
Essential Plants

OXYGEN
Essential Water

Earth Day
is Sponsored by

OXYGEN
Essential for Life

Discover Oxygen! Essential for Life

7/25/2007

Earth Day
is Sponsored by

OXYGEN
Essential Air

OXYGEN
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OXYGEN
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OXYGEN
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OXYGEN
Essential for Life

Discover Oxygen!
Essential for Life

Environmental Street Banners

Abstraction

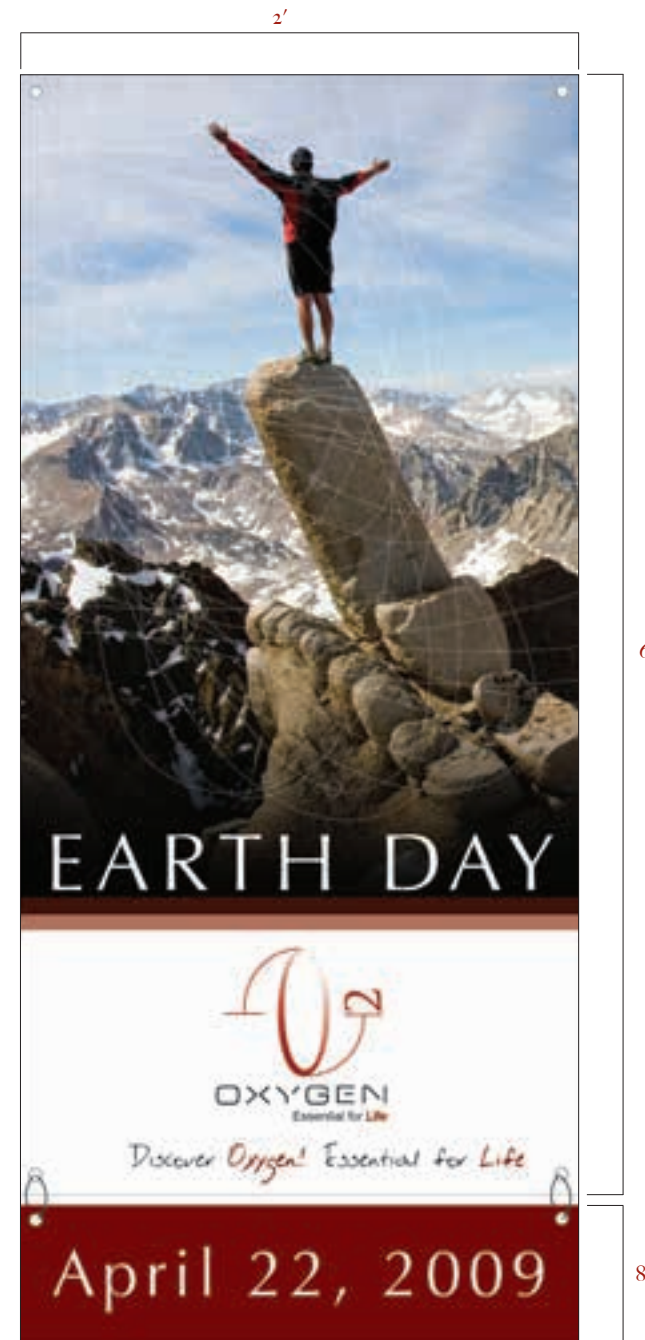
Street banners are an effective way of advertising events to a broad public. When placed strategically, Pedestrians and passing cars can view these banners from multiple vantage points. The street banners would be used to advertise Earth Day, linking the oxygen-awareness campaign to an Earth Day event. Raising awareness for preserving and protecting oxygen as a vital part of taking care of the earth.

New Design: Environmental Street Banners

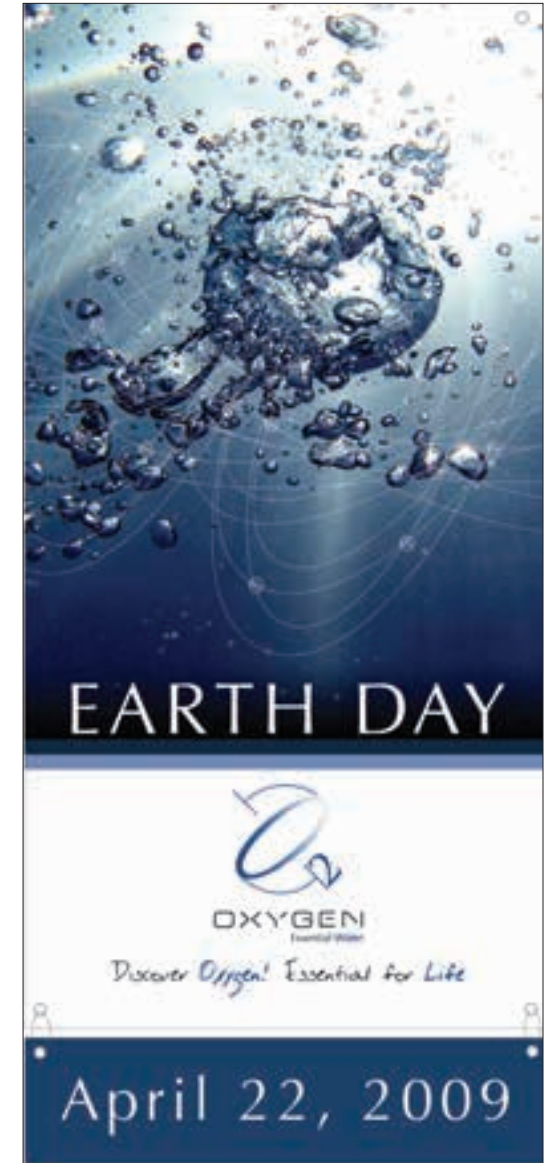
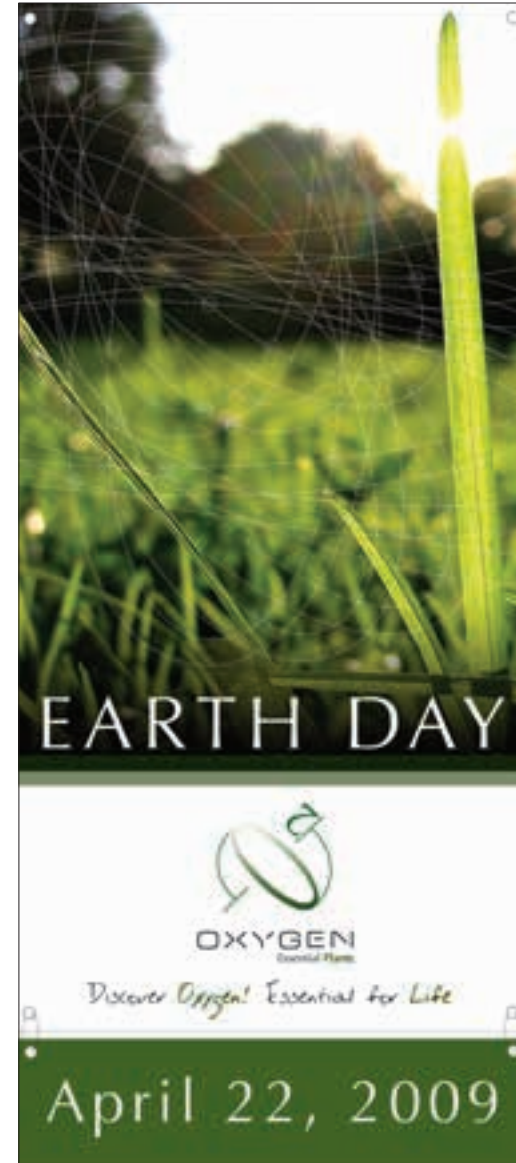
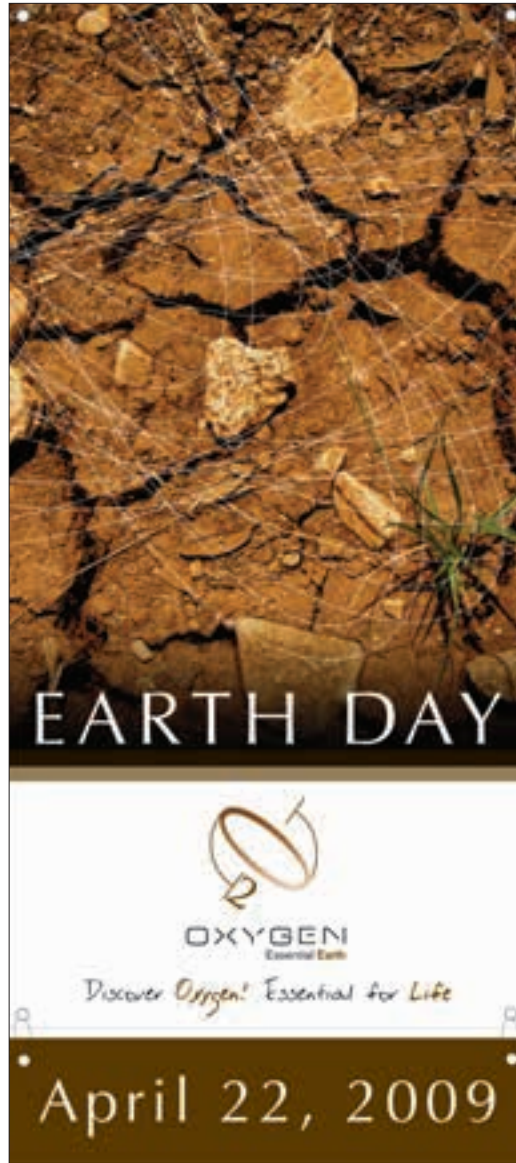
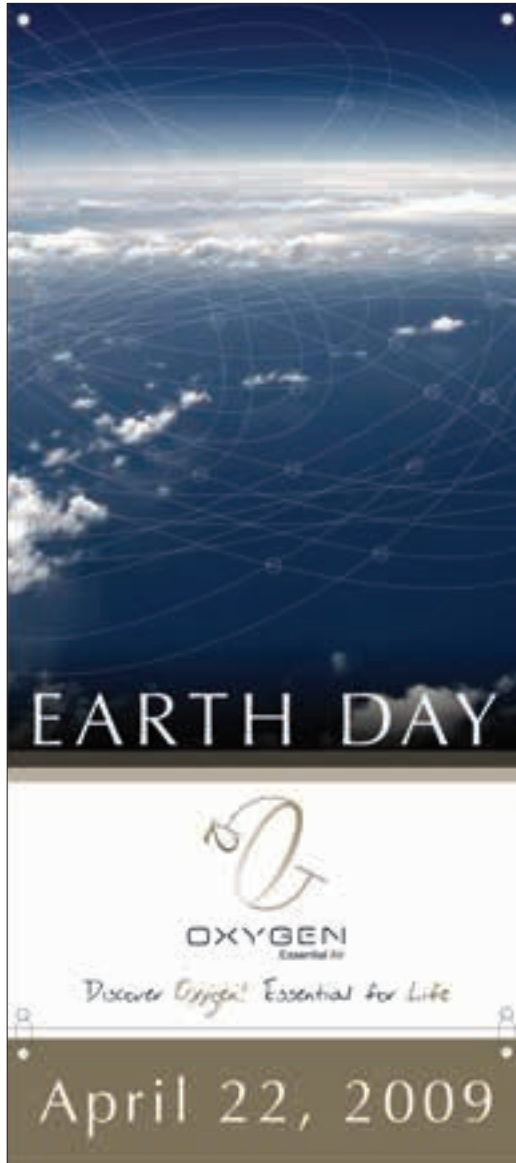
These banners are printed on reusable weather resistant vinyl to save money and materials. The date, also printed on weather resistant vinyl, is removable and separate from the main banner at the bottom. Doing this gives the banners a longer shelf life because the dates can easily be change, resulting in cost-efficiency. The large image and the thin-arc'd line on these banners one a valuable component to this deliverable in keeping with the design concept consistent throughout the campaign.

Design Placement: Environmental Street Banners

Street banners would be placed around the Boston Public Garden and also around the city to publicize Earth Day event



Environmental Street Banners



Environmental Street Banners

Boston Public Garden



Information Packet

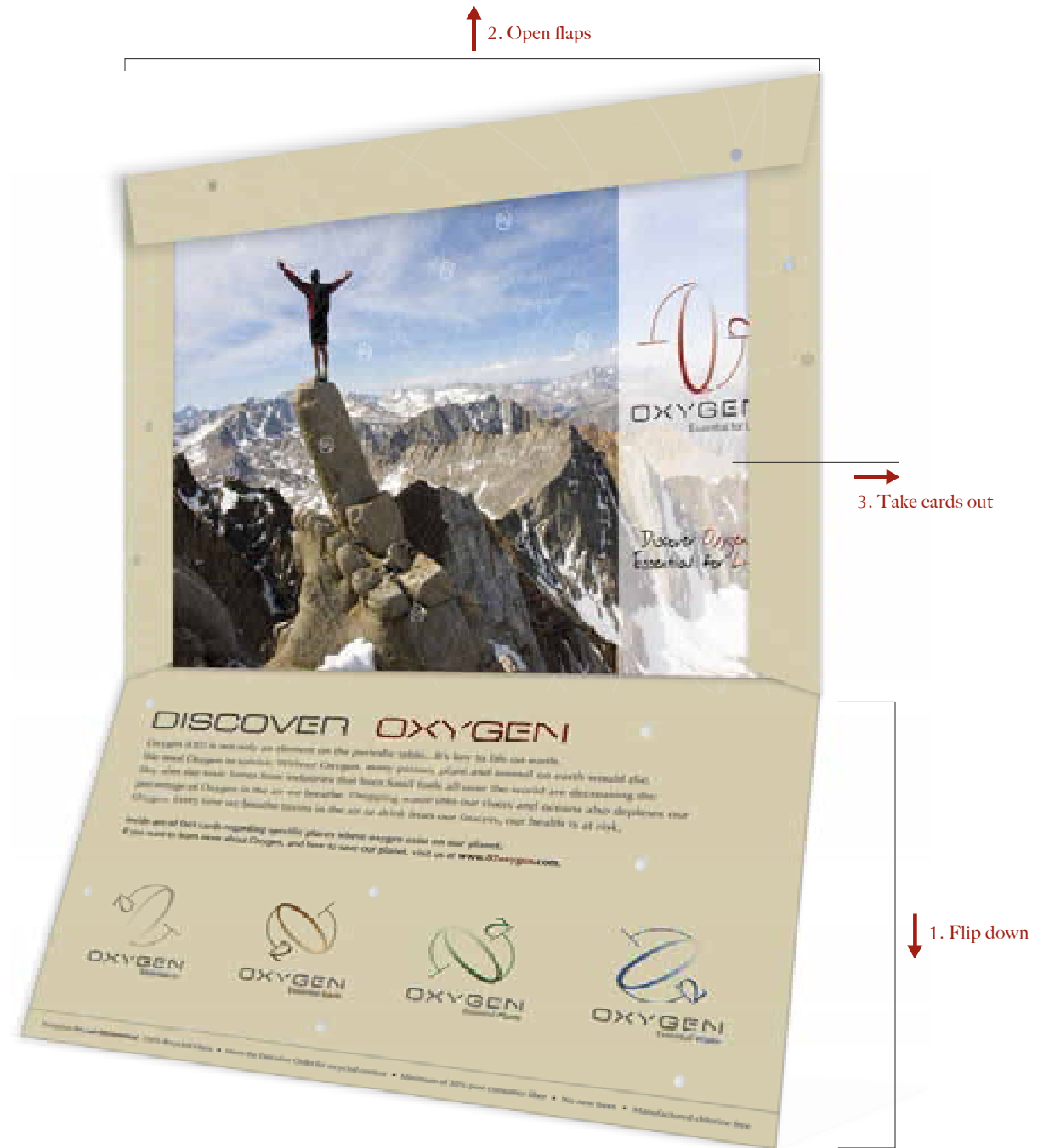
Abstraction

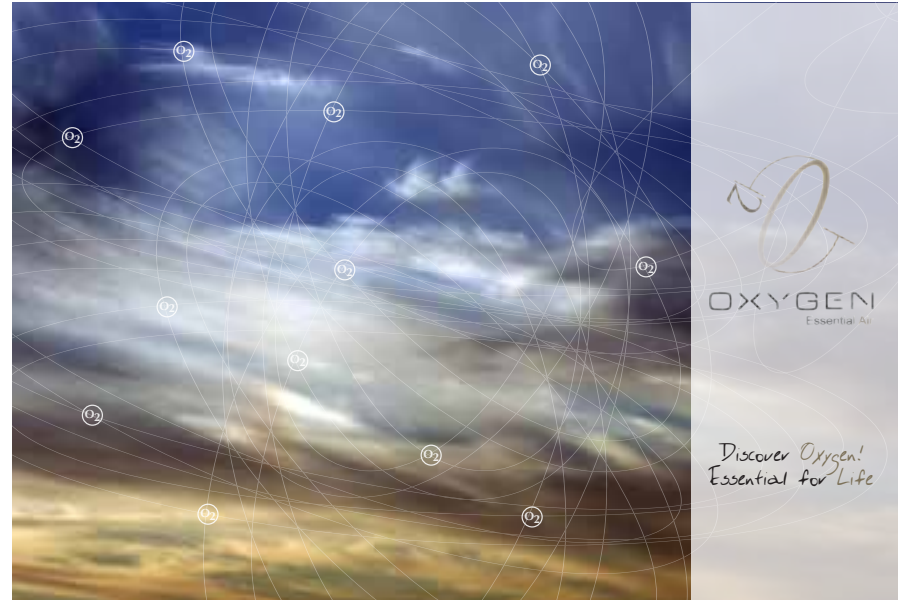
The oxygen information packet is designed to be portable, and it will be given out at the Earth Day event. The purpose is to invite people to learn about the campaign and will have the feel of opening an invitation. The packet includes informational cards discussing ways to improve the air we breathe.

New Design: Information Packet


The information packet is designed in a way to replicate the environment itself. The holes in the envelope give the impression of air flowing freely through the packet, furtrcing the concept that oxygen cannot be contained. The almost invisible arced lines running all over the envelope is keeping the design that is consistent and true to the movement of oxygen. The envelope is made out of Neenah Environment paper, “Desert Storm” which is approved bher reinfoy the FSC and made from recycled fibers. In choosing such a paper, the objective was to have the logo become saturated; giving the earth-tone colors a new level of vibrancy and richness.

Large imagery on front of the cards complements the campaign design, by utilizing specific images that relate to of oxygen location on the planet. On the back of the cards are important facts such as “What are the ways to keep the water clean,” on that location of where oxygen exists. The cards are also printed on a Neenah Environment FSC, recycled fiber paper called Mesa White. Both the envelope and the cards have a paper description so that the audience can appreciate the campaign’s commitment to protecting the earth, and the air.





ESSENTIAL FOR LIFE



OXYGEN
Essential for Life

What is Oxygen?
Oxygen is a chemical element with the chemical symbol O atomic number 8 on the periodic table. The word oxygen derives from two roots in Greek, (oxys) (acid, lit. sharp) and (-genes) (producer, lit. begetter). The appearance of oxygen is a colorless gas form. Oxygen as a liquid form, it has a very pale blue appearance. Air is a mixture of gases. Oxygen and nitrogen are the two main gases in the air that we breath. Oxygen accounts for about 21% of gas in the air. The abbreviation for oxygen is (O2). Oxygen is critical for life on earth.

Why do we need Oxygen?
In order for humans to survive, our bodies have figured out various ways to extract energy from our surroundings. One of the ways is with food, which provides our cells with raw materials to make, repair and replace our cells as needed. A different kind of energy we need is that which allows us to make use of raw materials. The body has figured out a way to extract this from oxygen. When you inhale, the oxygen in the air is absorbed into your bloodstream through tiny sacs in your lungs, called alveoli.

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ESSENTIAL FOR AIR



OXYGEN
Essential Air

Where is Oxygen in Air?
The atmosphere surrounding Earth is full of air! The air in our atmosphere is made of molecules of different gases. The most common gases are nitrogen (78%) and oxygen (about 21%). There are other types of air molecules as well, but in very small quantities. Air is important for almost all life on Earth including plants and animals. Plants need gasses from air to do photosynthesis. Animals need to breath air to get the oxygen they need to survive.

As you move up in altitude through the atmosphere, the concentration of air molecules decreases. Some people call this "thin air". The air is thinner higher in the atmosphere because there is lower pressure the higher you go up.

Learn more about oxygen in air, visit our website at www.02oxygen.com.

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ESSENTIAL FOR EARTH



OXYGEN
Essential Earth

Where is Oxygen in Earth?
Oxygen is the most common element in the earth's crust. Without oxygen, life as we know it would not exist. There are only a few microbes known that do not require oxygen to live. Every other life form including tiny bacteria, fungus, trees, animals and people needs oxygen.

The most important change in Earth's environment since life began is the buildup of free oxygen in the air. Before life became established on earth, and even for some one or two billion years afterwards, the air contained no free oxygen. Today, the atmosphere is 21 percent oxygen. The significant buildup probably began about two billion years ago, with the appearance of cyanobacteria.

Learn more about oxygen in earth, visit our website at www.02oxygen.com.

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ESSENTIAL FOR PLANTS



OXYGEN
Essential Plants

Where is Oxygen in Plants?
Oxygen (O₂) is used in large quantities by plants. If you were to analyze a dried plant you would find that about 45% consisted of Oxygen atoms. Just like humans, plants need fresh air and their cells use O₂ in the same kind of quantities that ours do.

The leaves of a plant have easy access to O₂. They make it as a natural bi-product of the process of producing plant sugars and breathe it out as waste during the process of photosynthesis. The roots of the plant do not have the same amount of O₂ available to them. They have to work twice as hard to find enough for their needs. Insufficient O₂ at the roots will reduce the plants root respiration and result in the shutting down of photosynthesis.

Learn more about oxygen in plants, visit our website at www.02oxygen.com.

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ESSENTIAL FOR WATER



Where is Oxygen in Water?

People need oxygen in the atmosphere to survive and animals that live in the ocean, like fish, need dissolved oxygen in the water to survive. Dissolved oxygen (DO) is the amount of oxygen (O₂) dissolved in water. Dissolved oxygen is one of the best indicators of water quality.

The amount of DO that the water can hold depends on the temperature and salinity of the water. Cold water can hold more dissolved oxygen than warm water and fresh water can hold more dissolved oxygen than salt water. So the warmer and saltier the water, the less dissolved oxygen there can be.

Learn more about oxygen in water, visit our website at www.02oxygen.com.

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ENVIRONMENTAL PROGRAMS



EarthCorps

EarthCorps is a non-profit organization founded in 1993. It is dedicated to building global community through local environmental restoration service. As an AmeriCorps affiliate, EarthCorps provides one-year intensive programs for young adults (18-25) to learn best practices in conservation techniques and develop skills in leading volunteers (ages 8-80). www.earthcorps.org

TruPlant

TruPlant seeks to engage young people as active citizens who improve conditions in their watersheds now and in the future. TruPlant empowers young people to learn more about the watersheds they live in and use their findings to create lasting solutions to pressing water quality issues. www.truplant.org

If you would like to find more environmental programs in your area and other ways of protecting our earth, visit our website at www.02oxygen.com.

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Website Concept

7/9/2007

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DISCOVER Water

Where is Oxygen in Water?

People need oxygen in the atmosphere to survive and animals that live in the ocean, like fish, need dissolved oxygen in the water to survive. Dissolved oxygen (DO) is the amount of oxygen (O₂) dissolved in water. Dissolved oxygen is one of the best indicators of water quality.

The amount of DO that the water can hold depends on the temperature and salinity of the water. Cold water can hold more dissolved oxygen than warm water and fresh water can hold more dissolved oxygen than salt water. So the warmer and saltier the water, the less dissolved oxygen there can be.

Oxygen enters the water at the surface of the water where exchange between the atmosphere and the water can take place. Waves and wind help put oxygen in the water. Dissolved oxygen is also put into the water as a bi-product of phytoplankton photosynthesis. The oxygen found in the deeper water comes from the mixing of the surface water.



OXYGEN
Essential Water

Discover Oxygen? Essential for life

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DISCOVER Air

Where is Oxygen in Air?

Air is the most common and only natural breathing gas. Other artificial gases, either pure gases or mixtures of gases, are used in breathing equipment and enclosed habitats such as SCUBA equipment, surface supplied diving equipment, recompression chambers, submarines, space suits, spacecraft and anaesthetic machines.

Most breathing gases are a mixture of oxygen and one or more inert gases. All breathing gases are alternatives to air and have been developed to improve on the performance of air by reducing the risk of decompression sickness, reducing the duration of decompression stops, reducing nitrogen narcosis or allowing safer deep diving.

Three Essential Features in Breathing Gas (Air) Safety:

- it must contain sufficient oxygen to support the life, consciousness and work rate of the breather.
- it must not contain harmful gases. Carbon monoxide and carbon dioxide are common poisons
- in breathing gases, there are many others.
- it must not become toxic when being breathed at high pressure such as when underwater. Oxygen and nitrogen are examples of gases that become toxic under pressure.



OXYGEN
Essential Air

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NATURAL PROCESS

Photosynthesis

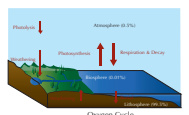
Photosynthesis, generally, is the synthesis of glucose from sunlight, carbon dioxide and water, with oxygen as a waste product. It is arguably the most important biochemical pathway known, nearly all life depends on it. It is extremely complex process consisting of many coordinated biochemical reactions. It occurs in higher plants, phytoplankton, algae, some bacteria, and some protists, organisms collectively referred to as photoautotrophs.



Leaves are the primary site of photosynthesis in plants.


Oxygen Cycle

Earth follows the basic principles of the Oxygen Cycle. Oxygen cycle describes the movement of Oxygen within and between its three main reservoirs: the atmosphere, the biosphere, and the lithosphere. The main driving factor of the oxygen cycle is photosynthesis, which is responsible for the modern Earth's atmosphere and life as we know it. Because of the vast amounts of oxygen in the atmosphere, even if all photosynthesis were to cease it would take between 5,000 to 2.5 million years to strip out more or less all oxygen.



Combustion

In a complete combustion, the reactant will burn in oxygen, producing a limited number of products. When a hydrocarbon burns in oxygen, the reaction will only yield carbon dioxide and water. When a hydrocarbon or any fuel burns in air, the combustion products will also include nitrogen. When elements such as carbon, nitrogen, sulfur, and iron are burned, they will yield the most common oxides.



OXYGEN
Essential for Life

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DISCOVER Earth

Where is Oxygen in Earth?

Oxygen is the most common element in the earth's crust. Without oxygen, life as we know it would not exist. There are only a few microbes known that do not require oxygen to live. Every other life form including tiny bacteria, fungus, trees, animals and people needs oxygen.

The most important change in Earth's environment since life began is the buildup of free oxygen in the air, before life became established on earth, and even for some one or two billion years afterwards, the air contained no free oxygen. Today, the atmosphere is 21 percent oxygen. The significant buildup probably began about two billion years ago, with the appearance of cyanobacteria.



OXYGEN
Essential Earth

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DISCOVER Plants

Where is Oxygen in Plants?

Oxygen (O₂) is used in large quantities by plants. If you were to analyze a dried plant you would find that about 45% consisted of Oxygen atoms. Just like humans, plants need fresh air and their cells use O₂ in the same kind of quantities that ours do. The leaves of a plant have easy access to O₂. They make it as a natural bi-product of the process of producing plant sugars and breathe it out as waste during the process of photosynthesis. The roots of the plant do not have the same amount of O₂ available to them. They have to work twice as hard to find enough for their needs. Insufficient O₂ at the roots will reduce the plants root respiration and result in the shutting down of photosynthesis.

A plant's growth and its yield are governed by the size and health of its root system. It can only grow to its full potential if the roots have enough O₂ for their needs. In plants grown hydroponically this essential ingredient is supplied dissolved in the nutrient solution.



OXYGEN
Essential Plants

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INTRODUCTION

Oxygen is not only an element on the periodic table...it's key to life on earth. We need Oxygen to survive. Without Oxygen, every person, plant and animal on earth would die.

Day after day toxic fumes from industries that burn fossil fuels all over the world are decreasing the percentage of Oxygen in the air we breathe. Dropping waste into our rivers and oceans also depletes our Oxygen. Every time we breathe toxins in the air or drink from our faucets, our health is at risk.

What is Oxygen?

Oxygen is a chemical element with the chemical symbol O atomic number 8 on the periodic table. The word oxygen derives from two roots in Greek, *oxys* (acid), its sharp and *genes* (producer). It originates. The appearance of oxygen is a colorless gas form. Oxygen as a liquid form, it has a very pale blue appearance. Air is a mixture of gases. Oxygen and nitrogen are the two main gases in the air that we breathe. Oxygen accounts for about 21% of gas in the air. The abbreviation for oxygen is O₂. Oxygen is critical for life on earth.

Why do we need Oxygen?

In order for humans to survive, our bodies have figured out various ways to extract energy from our surroundings. One of the ways is with food, which provides our cells with raw materials to make, repair and replace our cells as needed. A different kind of energy we need is that which allows us to make use of raw materials. The body has figured out a way to extract this from oxygen. When you inhale, the oxygen in the air is absorbed into your bloodstream through tiny sacs in your lungs, called alveoli.

Where is Oxygen?

In nature, free oxygen is produced by the light-driven splitting of water during oxygenic photosynthesis in cyanobacteria, green algae and plants. Algae produced about 73 to 87 percent of the net global production of oxygen, which makes it available to humans and other animals for respiration. Another major source of oxygen is trees. Trees can absorb carbon dioxide at the rate of 26 pounds per-year - especially young trees that are still growing - while releasing oxygen into the air. When looking at the oxygen cycle almost all living things need Oxygen.

OXYGEN
Essential for Life

Discover Oxygen? Essential for life

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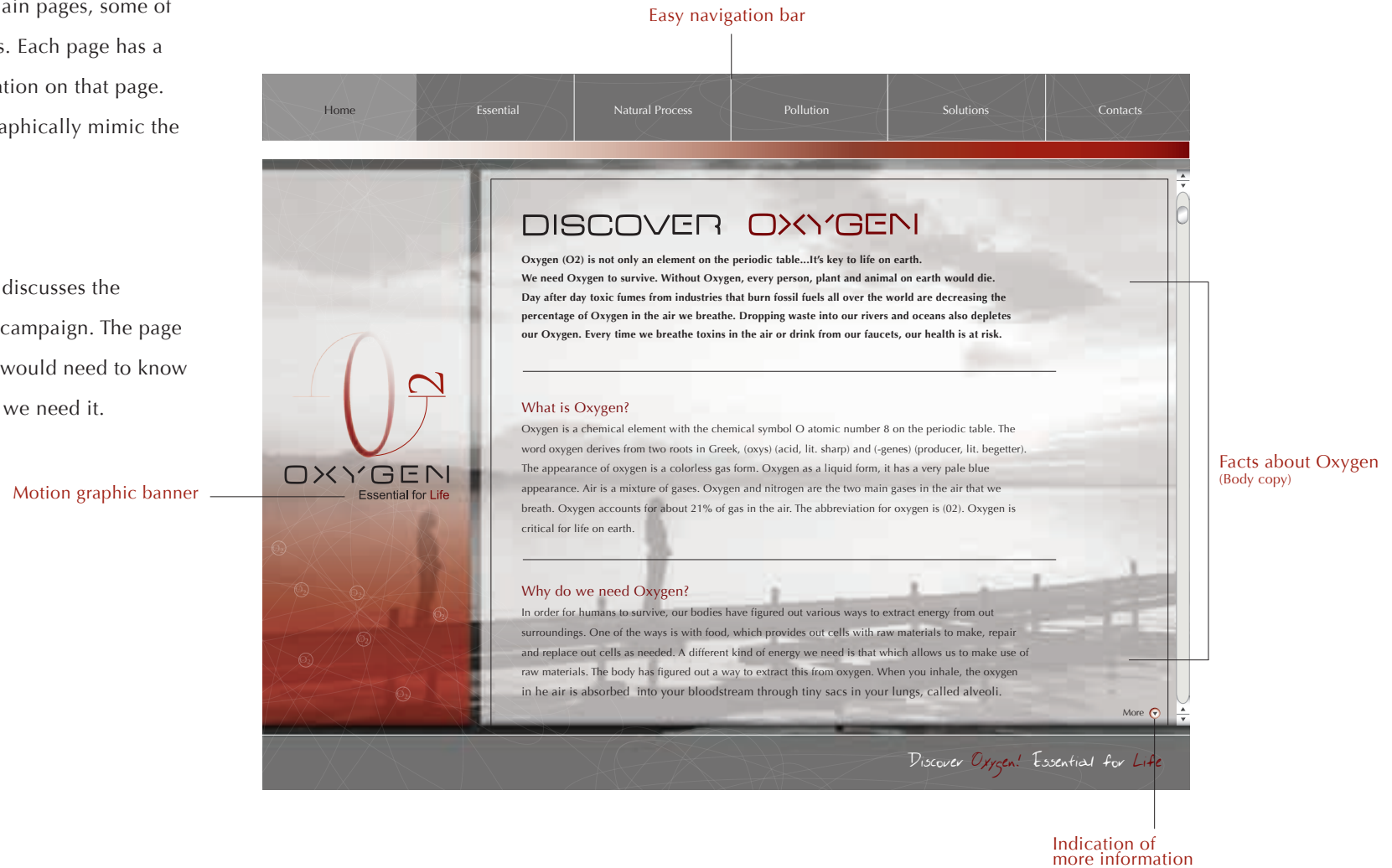
Website

Abstraction

The website is a user-friendly informational site, where users can learn about oxygen, where it comes from, how we get it, why we need it and much more. The site consists of six main pages, some of which link to other local environmental programs. Each page has a logo banner on the left connecting to the information on that page. The logo on the banner is designed in Flash to graphically mimic the movement of oxygen.

New Design: Home Page

The home page is an introduction to the site that discusses the importance and the reasoning for this awareness campaign. The page incorporates a description of everything the user would need to know about oxygen, from where it comes from, to why we need it.



Website Essential Pages

New Design: Essential Page

The Essential page is all about where oxygen exists on our planet. At the top of the page there are four quick links to direct users to a certain section on the page. For example, someone wants to know about where oxygen exists on earth, they can select one of the four quick links and it will take them to the relevant section on the page. This method makes it easy for people to find what they're looking for in less time. With easy access to navigation on the page, makes it extremely quick to find what user is looking for.



New Design: Natural Resource Page

This page discusses the process of photosynthesis, and also what the oxygen cycle actually does for the environment. It is essential for the audience to know how the environment works, and to understand how important it is to keep it safe.



New Design: Pollution Page

Air and water pollution are two of the major problems that our environment faces today and this page it discusses both problems in detail. Just like the Essential page, it has two quick links to bring to the section that a user wants to learn about.



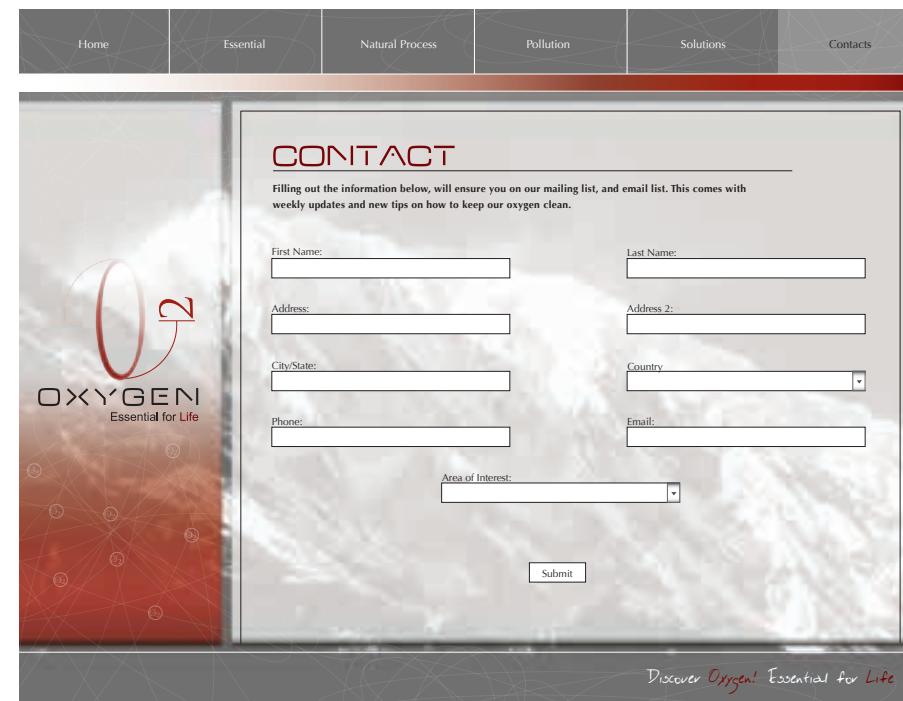
New Design: Solution Page

To address the problems of pollution, this page, has information about how to protect the air that we breathe. Also on this page is a section on environmental programs, which give a brief description of particular non-profit organizations and a link to their websites to get further information. These links are here so that the user can find the right organization that fits your needs in their local area.



New Design: Contact Page

The contact pages are where people can write to us, and give feedback on the campaign. It also will allow users to be placed on our e-mail list. This e-mail list will give weekly updates about the campaign, and some helpful facts about protect our oxygen.



“The recognition
of the value of the journey,
as opposed to the **imagined points**
of ending, informs the idea of process.”

–Tomato

Thesis Studio Survey

Introduction

While I was designing my awareness campaign, I had to think about what type of reactions I was going to get from it. I have conducted an online survey that would let me know what people thought about my campaign: Was it well designed? Did it communicate the importance of oxygen? Could this potentially become a real-life campaign, dealing with protecting our environment? Etc... This survey was sent through via-email, to graphic designers, and also to people from non-profit organizations dealing with the importance of our environment. Based on the respondents' comments, I know exactly what is working, and what is not working. With these results, I will fix the sections that need to be more refined to make it a successful awareness campaign.

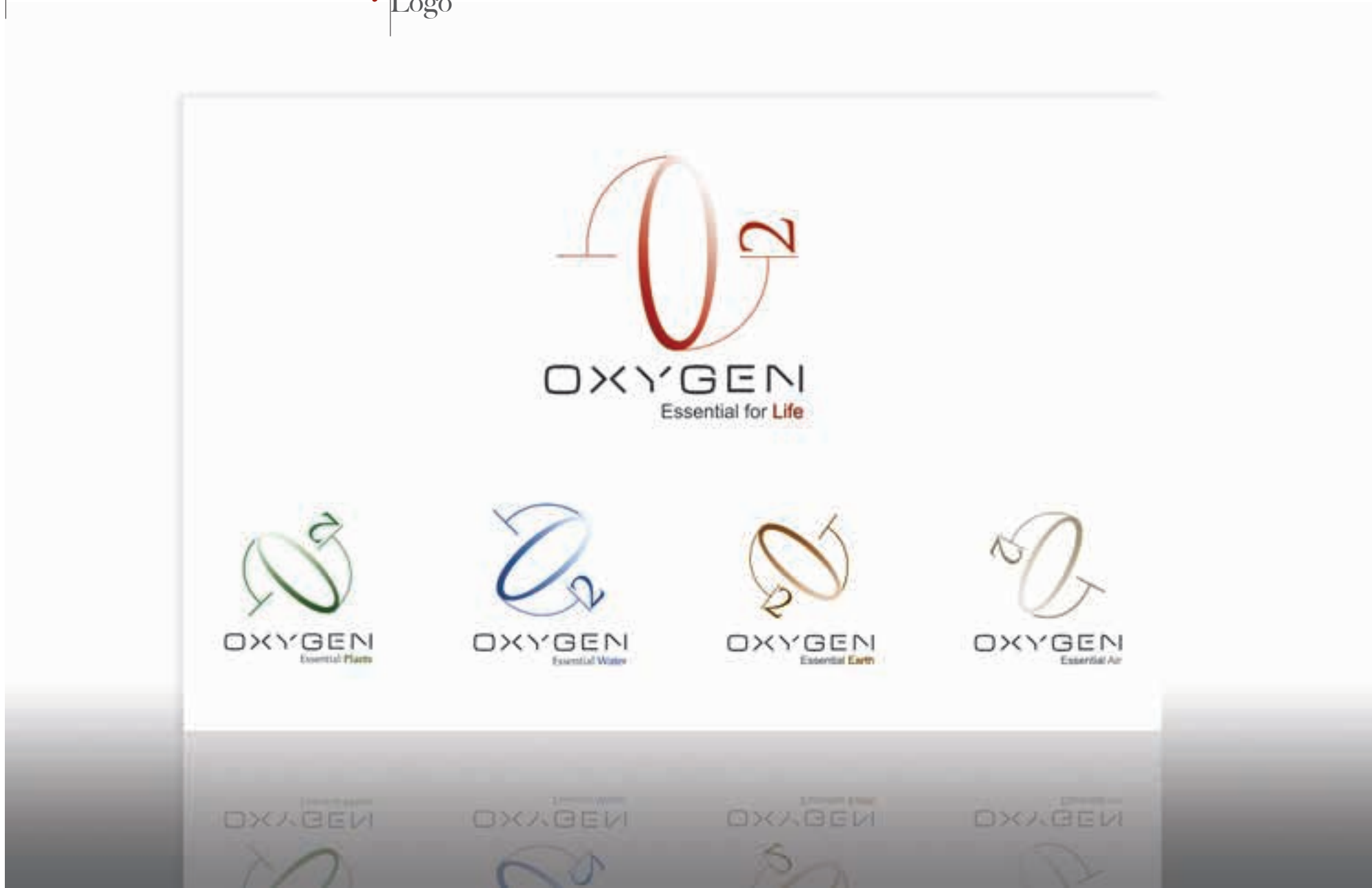
Knowing by sending my project to designer and organizations, I was going to get mix reactions about my oxygen campaign. That is okay, it will only make my project more powerful and better understood in the long run.

Respondents: Graphic Designers/Designers

- Alison Harris
Harris Media Services
- Boris Margolin
Graphic Designer
- Colin Toomey
Interactive Designer
- D.C.
MDG
- Judith Veronesi
Mount Ida College, Graphic Design Program
- Matt Romanos
Sitetrends Integrated
- Megan LittleJohn
Cubellis
- Peter Bianco
BiancoMarchilonis/Adjunct Professor
- Steph Lawrie
Market Master-Legal
- Thomas Brand
Children's Hospital Boston
- Tom Bowling
Mount Ida College, Graphic Design Program

Respondents: Non-profit Organizations

- Armond Cohen
Clean Air Task Force
- Beth Baker
Appalachian Mountain Club
- Carl Zukroff
Museum of Science, Boston
- Fred Durso
Appalachian Mountain Club
- Susan Arnold
Appalachian Mountain Club



Question

Do you feel that the Logos communicate the importance of oxygen? Are they...

Response Percentages

Very Effective (%)	Moderately Effective (%)	Not Effective (%)
11.5	76.9	11.5

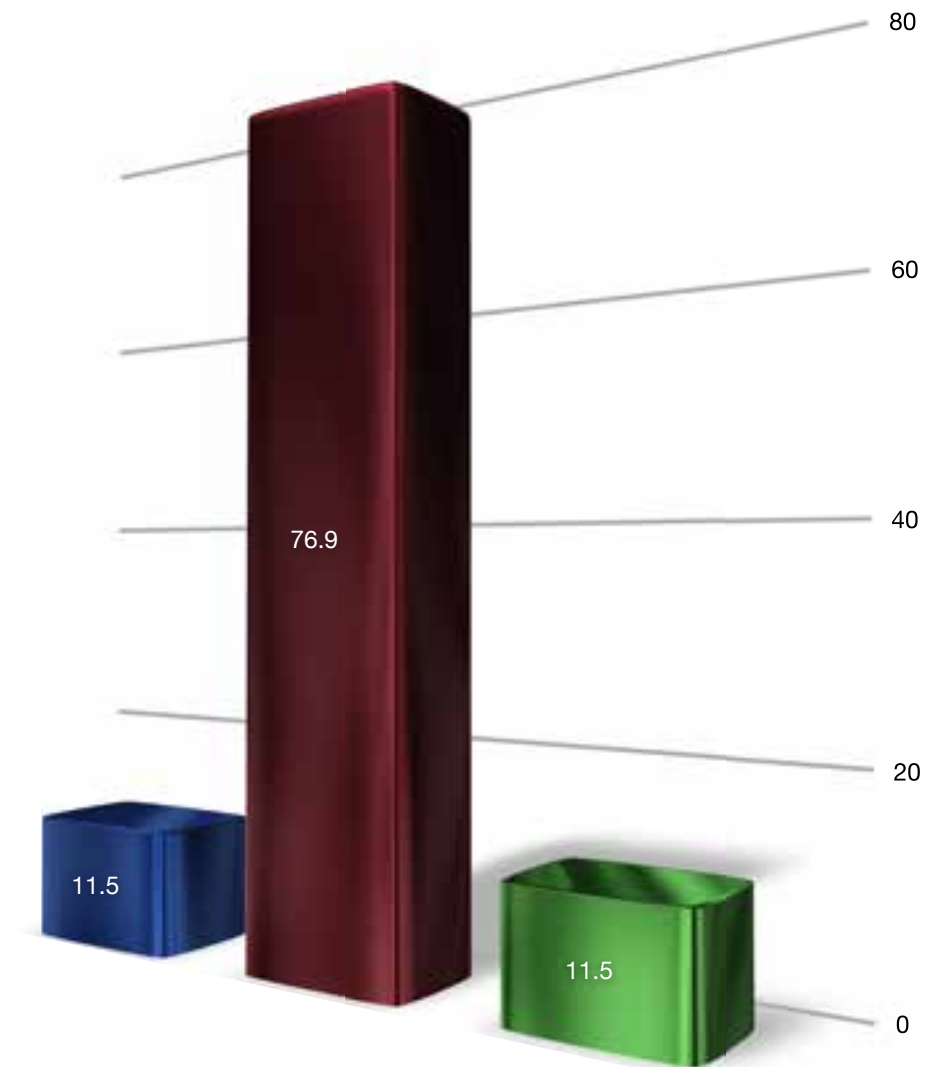
Respondents Comments

"Moderately effective at communicating the 'importance' of oxygen
More effective at communicating the 'awareness' of oxygen."

"I like the use of different colors which highlights the "focus" (i.e. Essential Water, etc)."

"The logos communicate a aura of technical superiority and sophistication, but I do not believe importance is necessarily the strongest feeling they provoke. The logos are also extremely difficult to recognize at small sizes."

"The colors are great. I like the typeface for Oxygen, and also like the concept of movement, but am not sure that the movement translates well without your description."





Question

Do you feel that the magazine advertisements communicate the importance of oxygen? Are they...

Response Percentages

Very Effective (%)	Moderately Effective (%)	Not Effective (%)
50	46.2	3.9

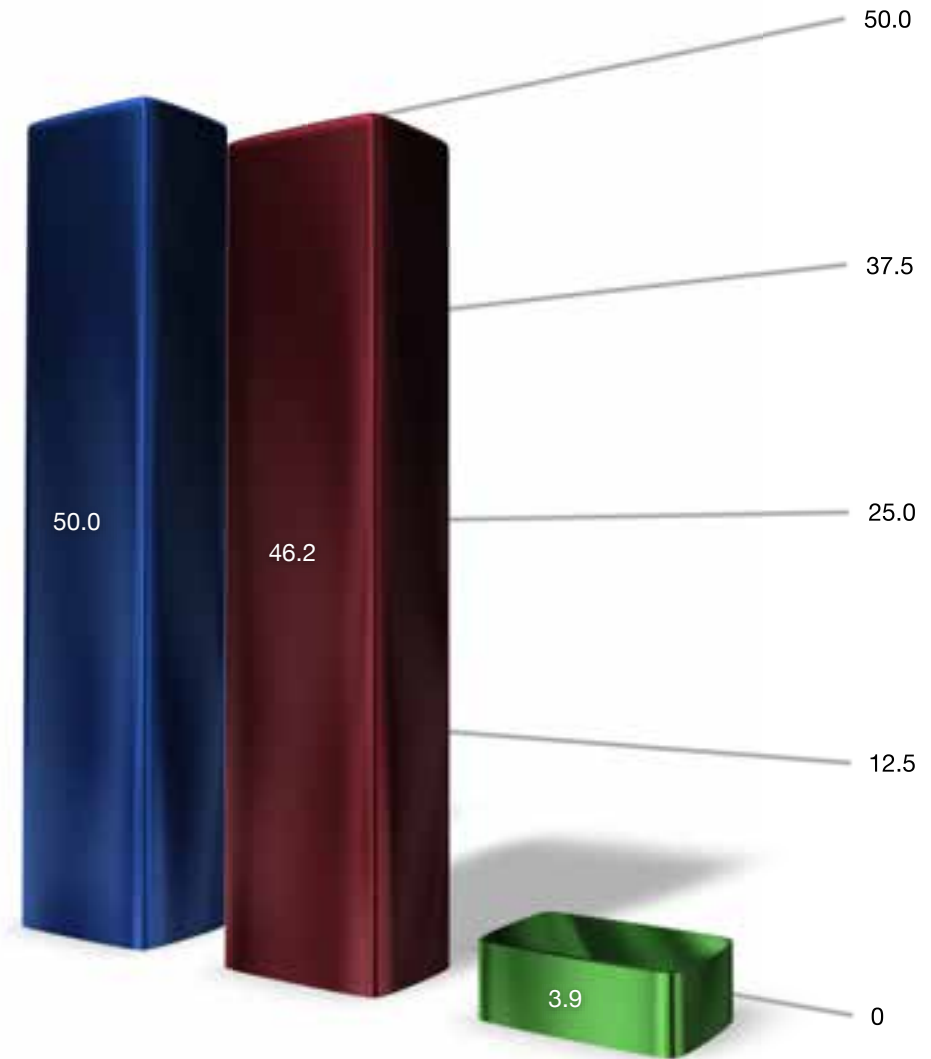
Respondents Comments

"What if the bubbles in the Water made up an abstract O2 logo. Earth would have the cracks , Grass would be viewed from a looking down instead of blade level, (think crop circle approach for the grass) earth would be cloud formation, same image, just manipulated. I like the use of different colors which highlights the "focus" (i.e.Essential Water, etc)."

"I like the images a lot; very inviting, great choices. Personally, I would prefer if the headline font were more prominent and possibly in another font style that would deliver more impact. This is probably more of a personal preference (design style) though."

"The imagery on the ads are their strongest selling point, but the lack of a provoking thought or headline hides the ads relation to the importance of water."

"Great choice in images and color schemes."





Question

Do you feel that the environmental kiosks communicate the importance of oxygen? Are they...

Response Percentages

Very Effective (%)	Moderately Effective (%)	Not Effective (%)
50	45.8	4.2

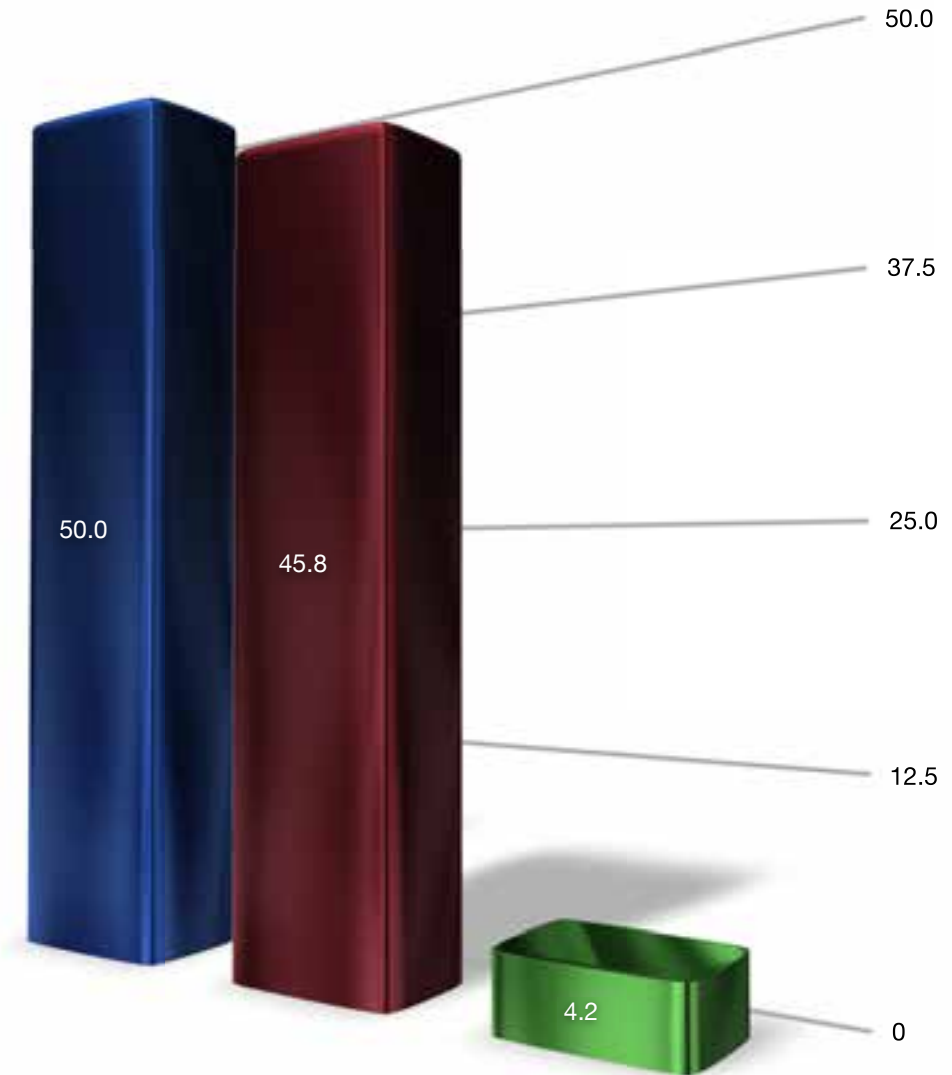
Respondents Comments

"I do like the consistency of image use and exploration of the logo as a 3-D element. Thinking direction is solid."

"I like the visual impact of the kiosks. I think they are (and would be) very noticeable and inviting in many surroundings. I like how the facts are very prominent (in terms of the text treatment) and again i think the headline would benefit from being more prominent as well (again, just a personal preference). Overall, very awesome and love the earth tones."

"The metal wrapping is terrific."

"Would it be more effective if you included the percentage of oxygen in air 30 years ago, 40 years ago etc?"





Question

Do you feel that the environmental kiosks placement communicate the importance of oxygen? Was it...

Response Percentages

Very Effective (%)	Moderately Effective (%)	Not Effective (%)
29.2	45.8	25

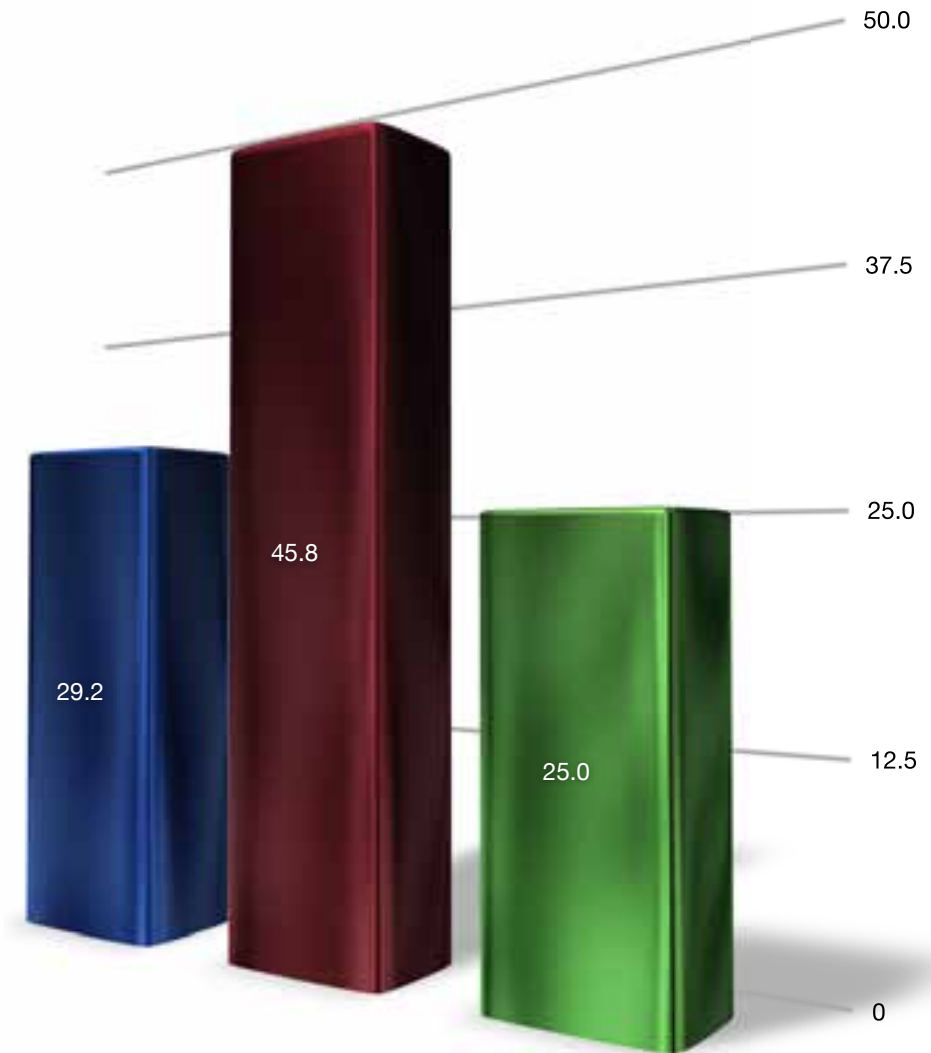
Respondents Comments

"I think placing the information at parks or playgrounds is a good idea. (I'm not sure people would be open to any type of advertising at the public gardens though since its such a revered and peaceful place in the city.) Along running trails would be another suggestion."

"Unfortunately I think the kiosks mar the natural beauty/experience people are seeking in the Public Garden, and it will turn them off to encounter them there."

"What if instead of pre-manufactured signage, the approach would utilize existing, natural elements, (trees, grass, gravel, water's edge) without harming the environment? That way, the message is reinforced with what you are talking about, naturally."

"The actual placement of the ads is both strategically functional and tasteful."





Question

Do you feel that the environmental street banners communicate the importance of oxygen? Are they...

Response Percentages

Very Effective (%)	Moderately Effective (%)	Not Effective (%)
56	40	4

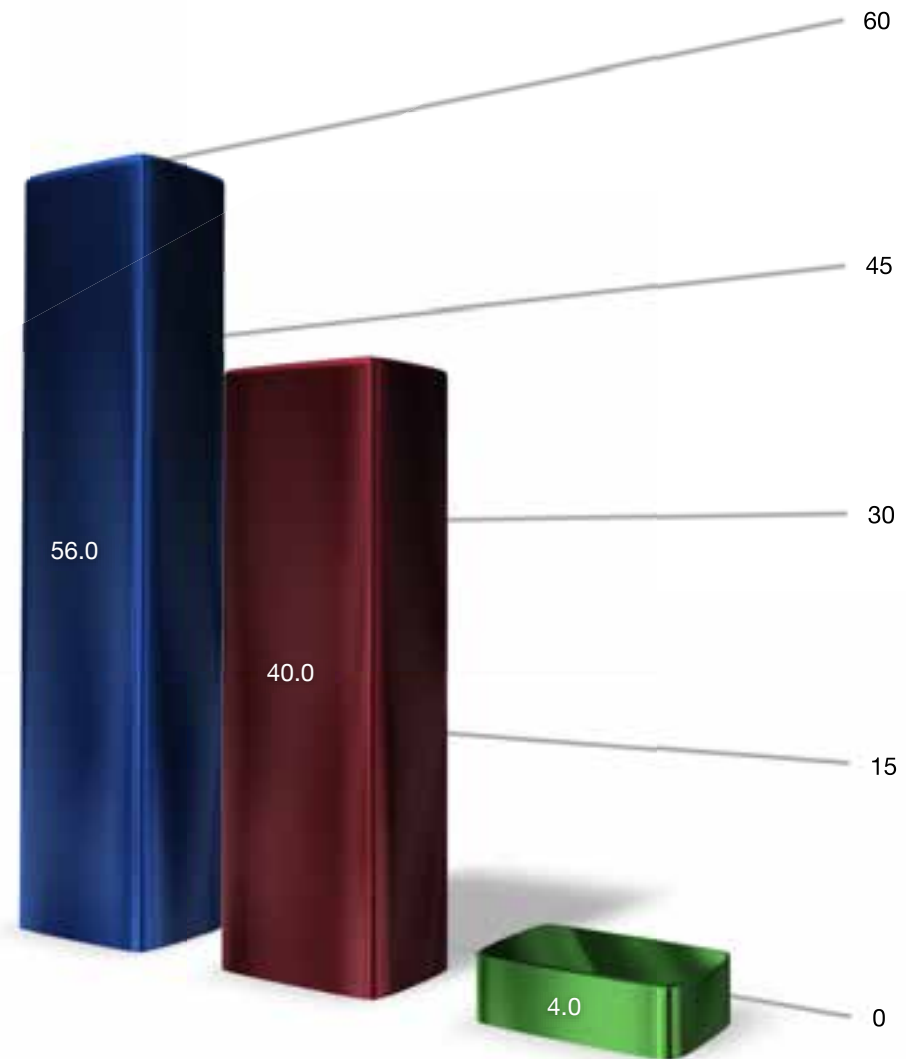
Respondents Comments

"Everything depends on visual acuity...how people see things from a distance. They're attractive for sure, but if they're on street poles 15 feet above the road, the small type is too elegant and unreadable to succeed, especially for drivers whizzing by."

"Use of text, graphics, white space with image, logo etc, balances nicely."

"I like these a lot. Again, I think that the headline would benefit tremendously from a text treatment much like "EARTH DAY" is treated here. The images are awesome, text treatment of EARTH DAY, perfect. You may want to think about moving the date up on the middle piece (above the logo area). Great stuff."

"Once again without a insightful thought or headline text on the logo is the only element of the banners communicates the importance of water."





Question

Do you feel that the environmental street banner placement communicate the importance of oxygen? Is it...

Response Percentages

Very Effective (%)	Moderately Effective (%)	Not Effective (%)
37.5	54.2	8.3

Respondents Comments

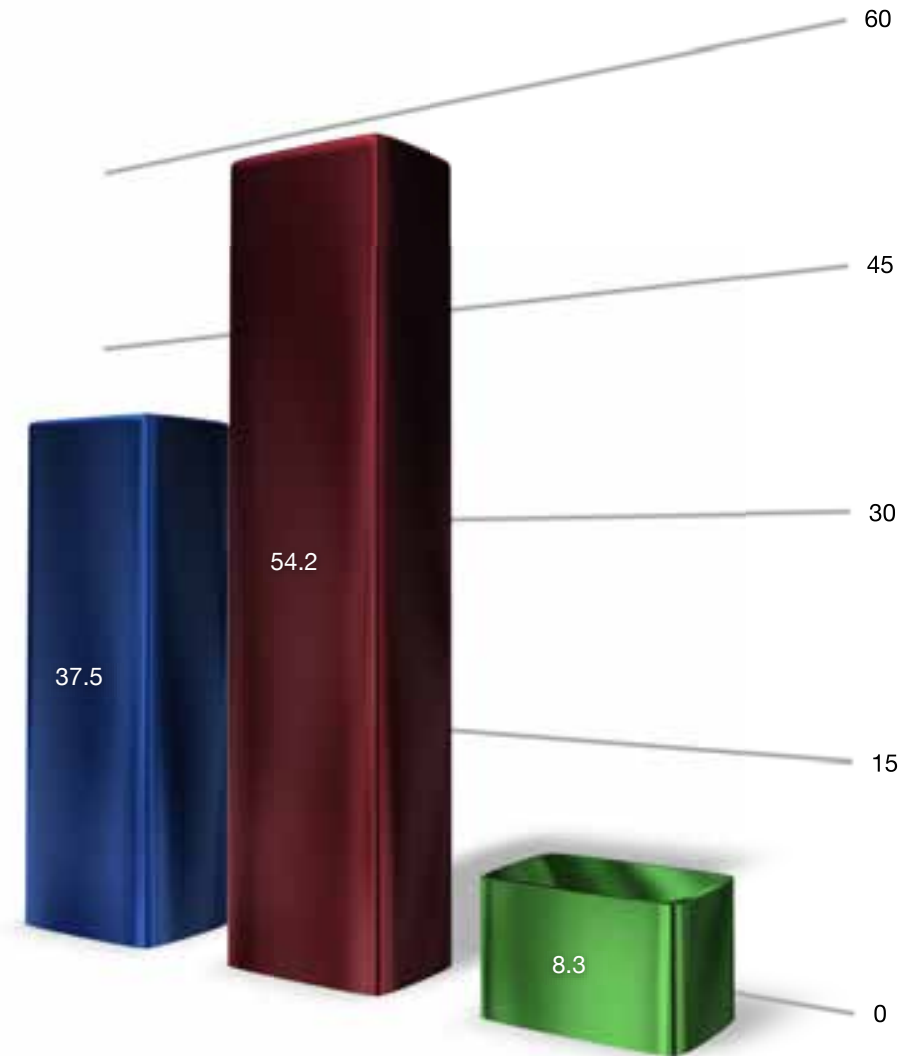
"Street banners may actually be more effective, and blend in better, in the public garden than the kiosks."

"I like the placement for these as well. The overall banner may benefit from them being a little longer (vertically) to deliver more impact and draw more attention."

"The lamppost banners are both strategically tasteful, and functional."

"Once again without a insightful thought or headline text on the logo is the only element of the banners communicates the importance of water."

"Yes. The tie-in to Earth Day give it context and it makes sense."





Question

Do you feel that the informational packet communicate the importance of oxygen? Is it...

Response Percentages

Very Effective (%)	Moderately Effective (%)	Not Effective (%)
66.7	25	8.3

Respondents Comments

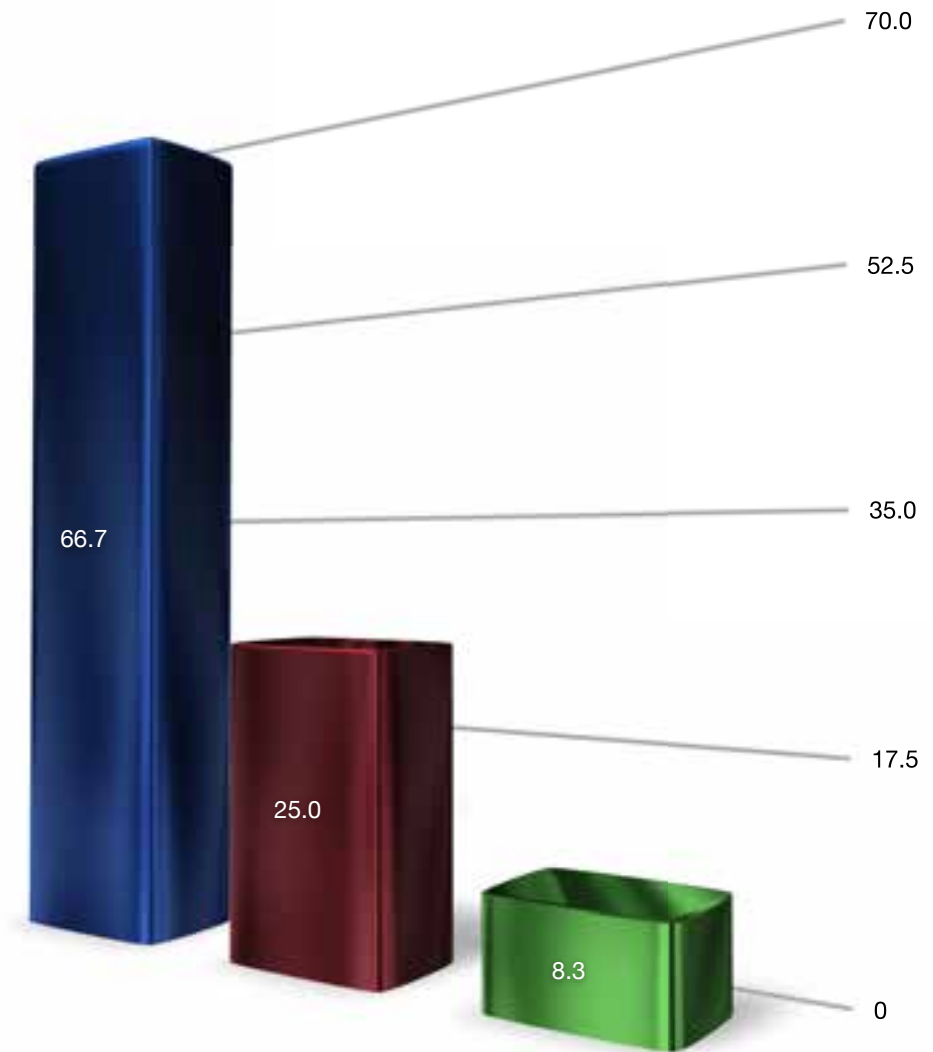
"Yes, terrific layouts, good visuals. Conveys a sensibility of recycling and protecting the Earth, not just oxygen."

"Very good. I think the imagery for the campaign (from what I have seen so far) is amazing. The earth tones, colored logos are all great elements that deliver impact and messaging for all components. The layouts look clean and effective. I still think that the "Discover Oxygen, Essential for Life" should be in a different font/treatment."

"The lamppost banners are both strategically tasteful, and functional."

"The water one fits in with the magazine advert as its cropping the same image, the others however do not tie in with the other magazine ads."

"Beautiful. Enough info to explain here. Many people are now highly sympathetic to the theme anyway — it's good to see you working on it."





Question

Do you feel that the website communicate the importance of oxygen? Is it...

Response Percentages

Very Effective (%)	Moderately Effective (%)	Not Effective (%)
52.2	39.1	8.7

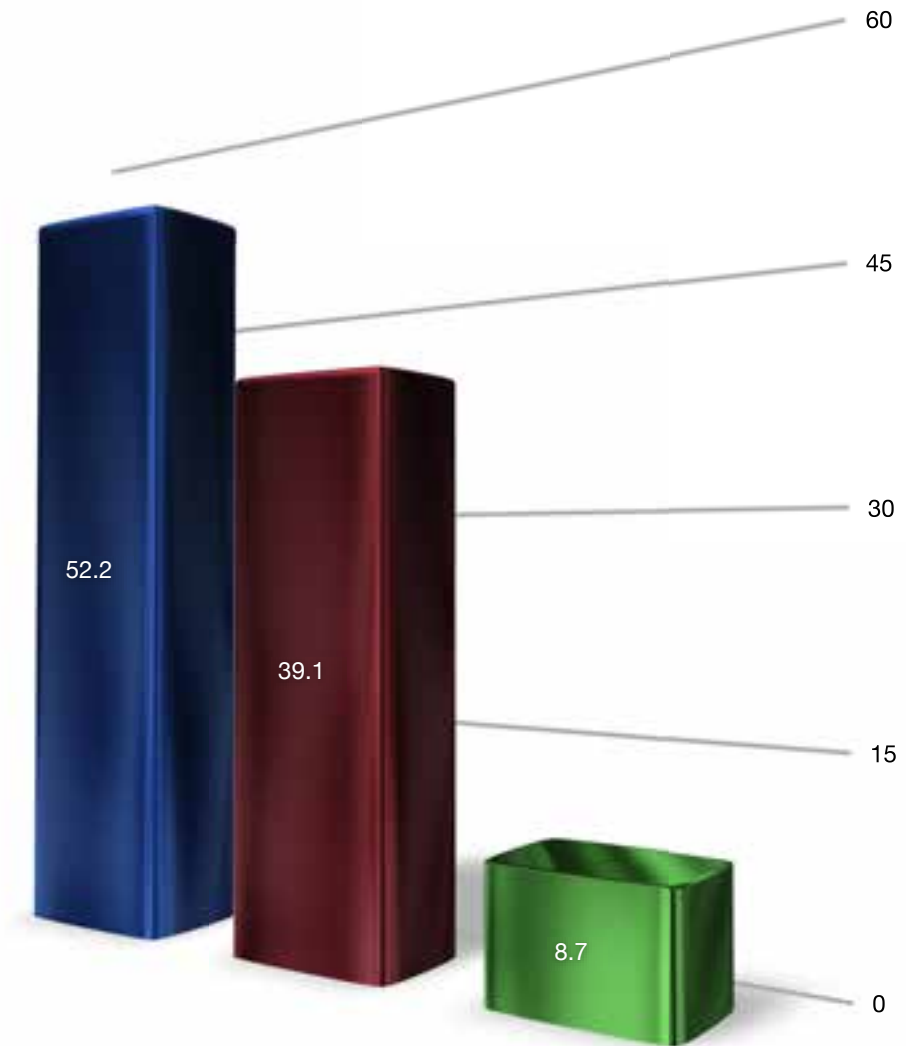
Respondents Comments

"Main section of the site, background ghosted image might become tiresome as you navigate the site. Concern is the readability of the information presented. May want to consider soften a bit more if intend to keep within layout."

"Love the "color coding" for each area of the site. This will let the user know where they are in the site and what they are learning about. This site could be designed to include some Flash and transitional photos and illustrations to deliver a more impactful message to the user. The design looks clean and easy to navigate. This comment is in relation to the treatment of the "Discover Oxygen" text at the top of each page. IS this the same font used throughout the campaign (all elements)?"

"The lamppost banners are both strategically tasteful, and functional."

"Same thing different media. The importance of water is a question. In order to properly communicate this question the website as well as the ads needs to provoke an emotion."



Question

Have you found that the public is aware of how important our oxygen is to the earth and life in general?

Response Percentages

Yes (%)	No (%)
64.7	35.3

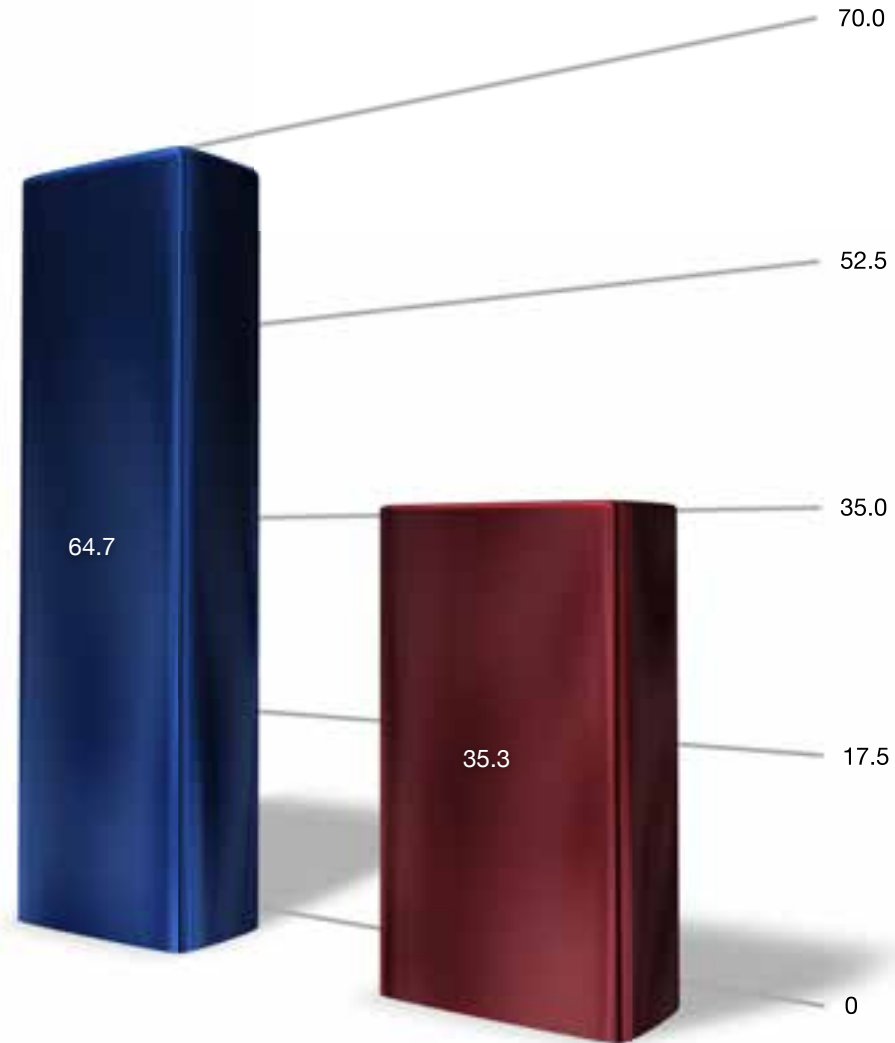
Respondents Comments

"Yes. I think people are aware but don't really think about it. You have forced them to look at oxygen differently."

"I think the public is aware of oxygen's importance, but not doing much to clean the air. I think your thesis does a wonderful job in promoting its importance – and getting the word out to spur change!"

"Yes. Again, the imagery is amazing and very inviting. Well done."

"I believe the public is generally aware of the importance of water, even if that awareness is only in the back of their heads. The fact that every complex living organism needs to breathe is one of those aspects of life that most people take for granted. Your materials need to better bring the importance of this need to the foreground."



Question

Do you think I've chosen the best ways to convey this information?

Response Percentages

Yes (%)	No (%)
88.2	11.8

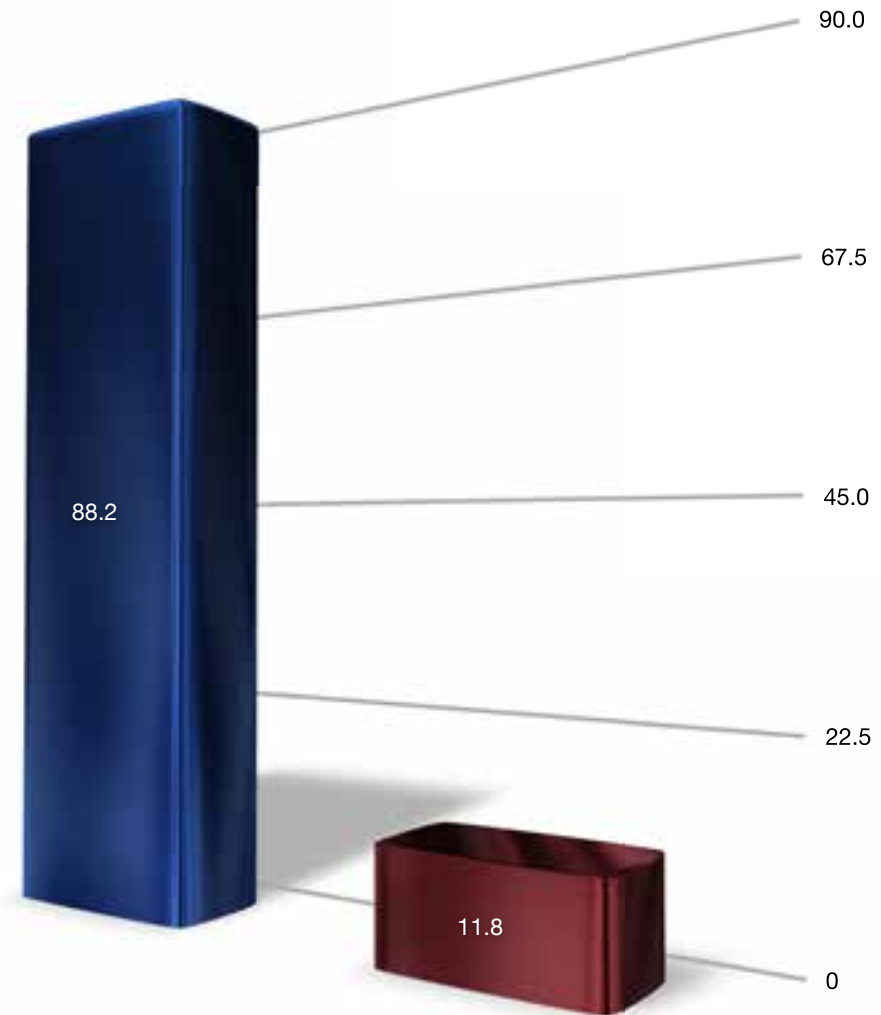
Respondents Comments

"In print, there are not too many choices...you've covered a wide spectrum of venues, so it may be a case of covering all your bases to ensure that someone, somewhere, gets a peek somehow! You cannot predict what someone will read...or not."

"All applications (Boston Public Garden) as well as tying the campaign into Earth Day are great. I could honestly envision this campaign being very successful in today's marketplace."

"The imagery is fantastic but your catalog of communicational material requires more provoking language."

"You have chosen all the options available to you in the format of your study, and utilized them all very effectively."



Question

Do you think the materials designed for this clean air project, promoting the importance of oxygen, can turn into an effective “real-life” campaign that could succeed in helping the public understand how to care for and protect the oxygen in our environment?

Response Percentages

Yes (%)	No (%)
76.5	23.5

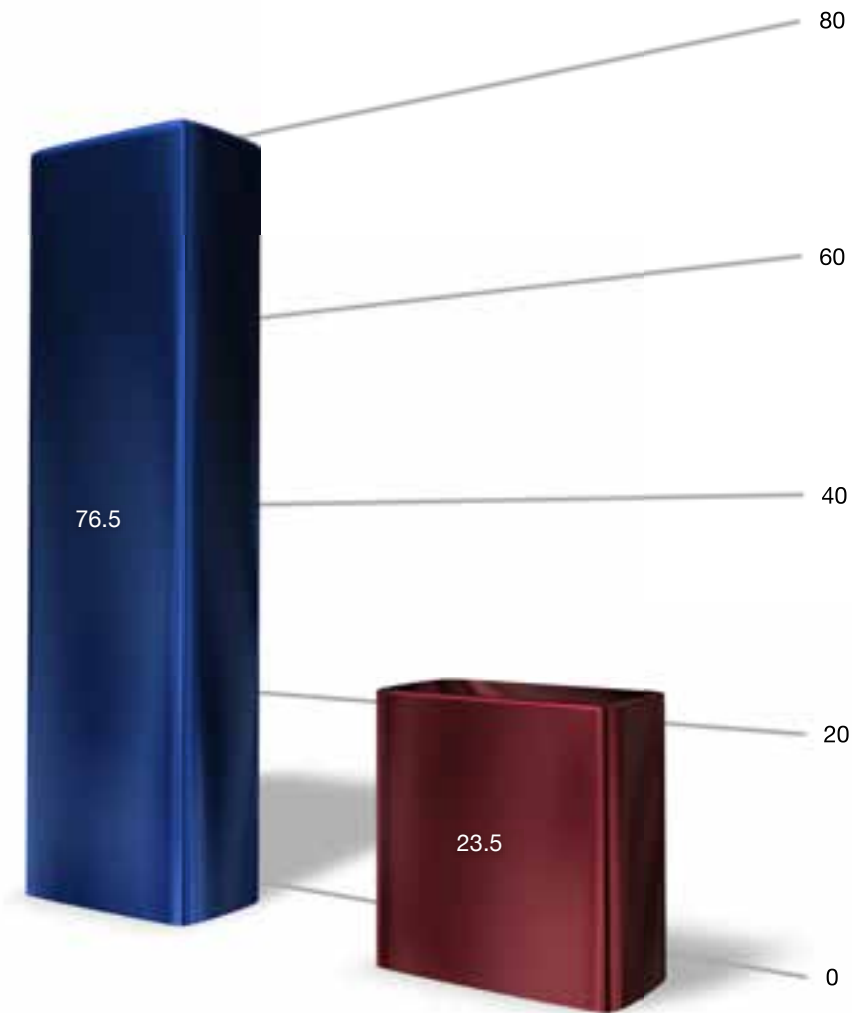
Respondents Comments

“Yes, it definitely brings awareness. I think people will need next steps. What they can do to get involved? Maybe a fund raising campaign?”

“Yes, especially if it was packaged with something like Earth Day. I think it needs that context to get people to pay attention.”

“With a little technical tweaking I think it would be an effective vehicle for the information.”

“Getting the public’s attention is all about inciting an emotion. Your pieces insight beauty within their imagery, but I don’t know how well that beauty transfers itself to the importance of water. I still would like to see a thought provoking question headline each of the pieces.”



Question

Do you have any suggestions for improving this campaign?

Response Percentages

Yes (%)	No (%)
41.2	58.8

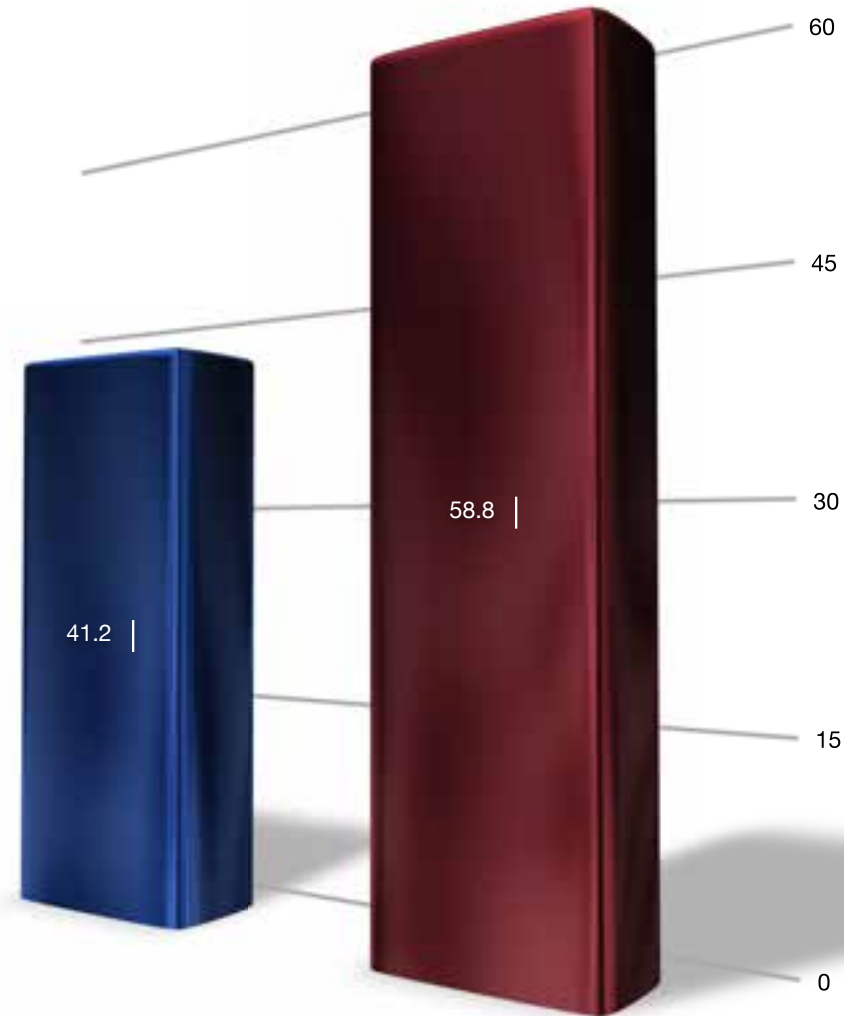
Respondents Comments

"A round table discussion with the aforementioned professionals would help."

"If this were to run "real life" I would also include local print media such as the Boston Globe or other dailies to increase awareness and reach a larger audience."

"Looks great. Maybe adding more people interacting with the elements would be an interesting idea?"

"My only comment would be to make the "Discover Oxygen, Essential for Life" headline more prominent as well as making sure all fonts are consistent throughout the campaign."



Charles Eames

Architect, Designer

“Design is a plan for **arranging elements**
in such a way as best to accomplish
a **particular purpose.**”

— Charles Eames

Colophon

Cover and Back

Neenah Environment
Desert Storm – 100% Recycled, 30% Post Consumer
80# Cover

Inside Pages

Neenah Classic Crest
Classic Natural White
100# Text

Type Faces

Optima – Regular
Big Caslon – Medium

Printer

Pro Print

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