

Bioregional



One Planet Living goals and guidance for schools



One Planet
Living®

A framework
by Bioregional

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Bioregional champions a better, more sustainable way to live. We work with partners to create places which enable people to live, work and do business within the natural limits of the planet. We call this One Planet Living.

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With special thanks to Chip Romer, Marika Ramsden and the staff and students at Credo High School, Sonoma County, for contributing to the creation of these goals and guidance. Cover photo: Credo High



Section One: One Planet Living



What is One Planet Living?

One Planet Living® is a way to make it easy and attractive for all of us to lead happy and healthy lives within the environmental capacity of our one planet

It is a simple framework which enables everyone – from the general public to students and professionals – to collaborate on a sustainability strategy drawing on everyone’s insights, skills and experience. It is based on ten guiding principles of sustainability which we can use to create holistic, interconnected solutions.

Who is this document for?

This document is for students, teachers or parents wanting to build or transform a school community into a truly sustainable one. It describes the process for co-creating a One Planet Action Plan in a way that involves the whole community. These goals and guidance cover a lot of actions which you can take but you are probably doing many things already which are in line with one or more of the guiding principles for One Planet Living. It is a journey, so you can start with little steps and build up over time.

	Health and happiness
	Equity and local economy
	Culture and community
	Land and nature
	Sustainable water
	Local and sustainable food
	Travel and transport
	Materials and products
	Zero waste
	Zero carbon energy

Understanding One Planet Living

We only have one Planet Earth, but as a global society we’re living as if we have several planets and are consuming resources in ways which cannot continue. That means that a lot of things have to change. But we also know that if we work together on these problems we can enjoy just as much comfort and have more security and better health while living lives that are enriching, fulfilling and sustainable.

One Planet Living sets out to make this transition. It is a framework and an initiative which grew out of the experience of developing the pioneering BedZED eco-village in south London, UK in the early 2000s. Today there are organisations, communities, companies, destinations and individuals using One Planet Living in Europe, North America, Africa and Australia.

One Planet Living uses two headline indicators of living sustainably on Planet Earth:

Ecological footprinting, which is a way of accounting for a wide range of our demands on the Earth's productive land and sea.

Carbon footprinting, derived from climate science.

Other social, financial and environmental factors are also important such as access to clean water, education, wealth distribution, economic activity and pollution and these are included in the ten One Planet Living principles.

Ecological footprinting

Ecological footprinting is a powerful accounting tool. It adds up in 'global hectares' the forests, fisheries and agricultural land required to produce the wood, crops, livestock we consume, the land used for buildings and roads and the forests required to absorb carbon dioxide from burning fossil fuels. People have very different ecological footprints depending on the countries they live in and their lifestyles.

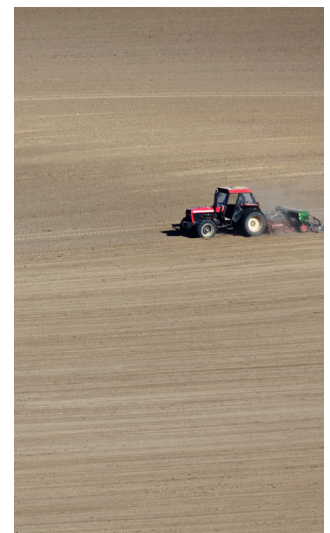
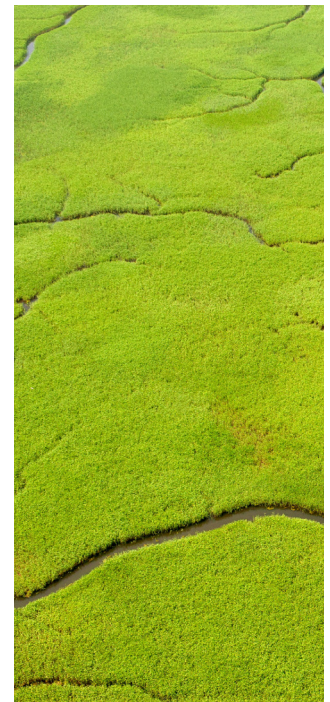
Globally we are consuming 50% more than the planet can sustain. If everyone on earth had the consumption patterns of an average European, we would need three planets to support us. If we lived like the average North American we would need five planets. However, we do know that it is possible to increase our quality of life while reducing our impacts to a one-planet level. More information on ecological footprinting is available on www.globalfootprintnetwork.org

Carbon footprinting

Well over half of our global ecological footprint comes from our carbon emissions. We know that humanity is warming the earth and changing the climate by putting carbon dioxide and other 'greenhouse gases' into the atmosphere, where they trap more and more heat as their concentrations build up. Scientists agree that we have to radically reduce our output of these gases if we are to limit the risks of dangerous changes in the climate. The bulk of greenhouse gas emissions comes from burning coal, oil and gas for energy, but some forms of farming also make a big contribution.

At the Paris Climate Summit in 2015 world leaders agreed that the increase in global average temperatures should be kept well below 2°C from their pre-industrial levels, with a 1.5°C safety limit recognised as preferable. Yet global emissions are on a trajectory which makes it highly unlikely we can keep the temperature rise below 1.5°C – and this alone will cause changes in climate, ice cover and sea level which are destructive and dangerous. To stay under 1.5°C, we probably cannot afford to release any more greenhouse gases into the atmosphere so we must move to zero carbon as soon as possible.

Ultimately, our impacts on the planet are the result of how we educate future generations and build communities, the types of products and services on offer, government policy and the choices we make as individuals. A One Planet School recognises the responsibility it has to provide young people with the skills, knowledge and tools that will help strengthen health and happiness for the planet. Through school campus operations and the taught curriculum, it can influence the wider community through its engagement with local businesses, local government and by organising community sustainability events and activities.



Writing your One Planet Action Plan

At the core of One Planet Living is the One Planet Action Plan. This document is co-created by students, teachers, administrators, parents and other stakeholders (such as local businesses and local government) and represents a response to the opportunities and challenges of One Planet Living, specific to the time and place of your school. The One Planet Action Plan is a dynamic document that can be modified and built on as the world and our knowledge change. It can be monitored, reported and reviewed periodically.

We encourage you to make your One Planet Action Plan public so that we can share experience, learn from each other and crowdsource solutions. Our aim is to unlock our collective potential to tackle humanity's greatest challenge – how to live happily and sustainably on our one planet.

One Planet Living is a commitment to going on a journey rather than a certification system. However, One Planet Schools can work alongside, build on or learn from standards and certification systems such as [Eco-Schools](#), [Green Ribbon Schools](#), [Ocean Guardian Schools](#) and other certifying school programmes.

When developing or interpreting your school curriculum think about how all ten One Planet Living principles are included or referenced along with key concepts such as sustainability and the natural limits of the planet. You may also want to think about how the widest range of skills are developed – perhaps using the notion of multiple intelligences¹ or the theory of learning with the head, heart and hands.

You may find it helpful to frame your action plan in terms of your school's:

- **campus** - its site and buildings and the processes and operations that happen there
- **curriculum** - what it teaches
- **community** - the local area and people which the school serves and is part of.

We have used these three terms throughout this document.

One Planet Schools have a One Planet Action Plan covering:

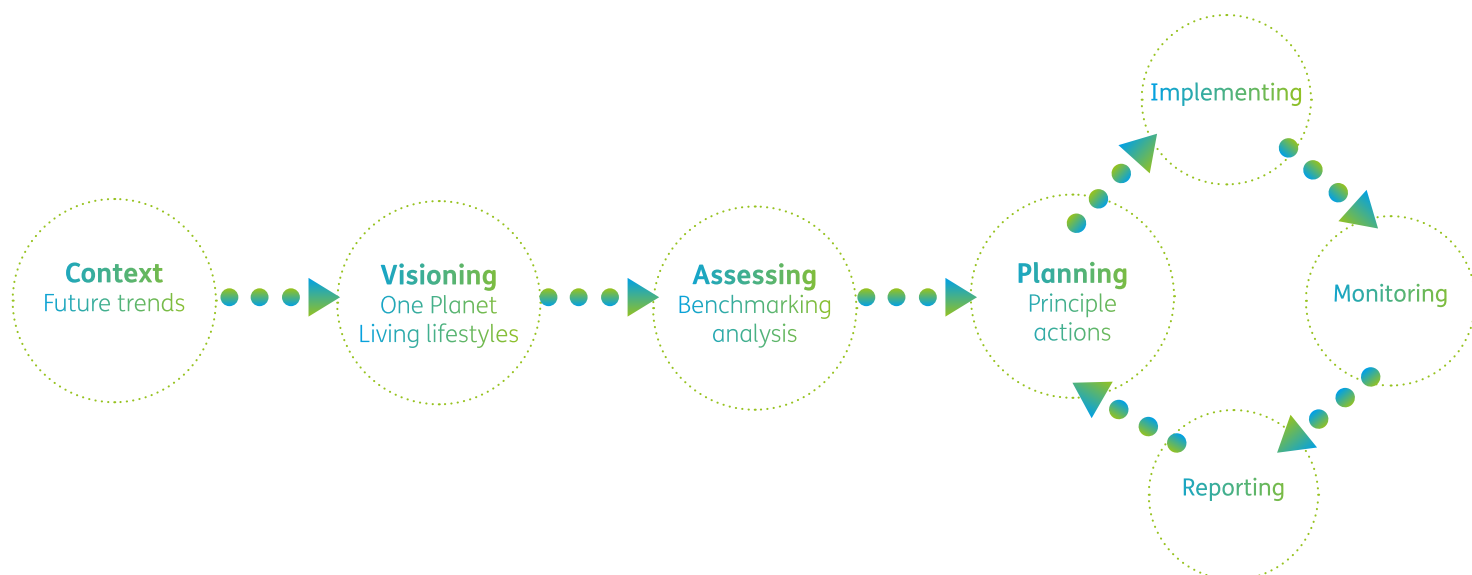
1. [Context: Future trends, opportunities and challenges](#)
2. [Visioning: One Planet Living lifestyles](#)
3. [Assessing: Benchmarking analysis of current plans or actions](#)
4. [Planning and implementing: Principle actions](#)

The One Planet Action Plan is best created through one or more workshops involving its key contributors. This is an iterative process – for example, envisioning a One Planet Living lifestyle informs the actions and vice versa. Think about the experience of the students, teachers, parents and other stakeholders in the school community. How is the campus operated? How does the taught curriculum relate to the ten One Planet Living principles? What other school community events, projects and activities fit in to the design of your action plan?

An initial One Planet School assessment workshop involving your school's key contributors can help to map out what your community is already doing. It could be a good place to start your One Planet Action Planning journey.

Your One Planet Action Plan is just part of a process. Once you have written your action plan you need to implement it! Bioregional and our network of 'One Planet Living integrators' or coaches can help if you need. You can update it periodically, monitor implementation and report on progress. Share your action plan so you can learn with and from your peers.

¹ The theory of multiple intelligences suggests that there are different types of intelligence (eg musical-rhythmic, visual-spatial, verbal-linguistic), rather than seeing intelligence as dominated by a single general ability. Howard Gardner proposed this model in his 1983 book *Frames of Mind: The Theory of Multiple Intelligences*.



The four sections of your One Planet Action Plan

1. Context setting: What you are doing already, opportunities, challenges and future trends

This sets the context. What are you doing already and how do you feel about what you are doing? You can then identify the key future trends, local and global opportunities and challenges which will affect your school community. These can include socioeconomic opportunities or challenges such as income level and school diversity, the impacts of climate change, or changes in the environment around your school or in your community.

2. Visioning: One Planet Living lifestyles

With context in mind, in this section you can envision how you and stakeholders will experience the school in the future. How will your school experience prepare students, teachers, parents and other stakeholders with the knowledge and tools they need to lead happy, healthy, sustainable lives.

This could include:

- A 'Day in the life' of a cross-section of the community – for a student, teacher, administrator, parent and any other member of your wider school community. Envision how they experience the community and how it has been designed to enable them to lead a happy and healthy One Planet Living lifestyle.
- A simple assessment of the ecological and carbon footprint of these lifestyles.
- Key partners you need to engage to make your One Planet School a success, such as local or national government bodies which fund and/or administer your school.

3. Assessing: Benchmarking analysis

If you have existing projects or activities on campus, or an existing curriculum, which you think relates to One Planet Living you may want to carry out a more detailed benchmark or gap analysis. This identifies which aspects of One Planet Living and its ten principles you are doing well on, and how much further you may need to go in your commitments.

4. Planning: Principle actions

The actions section runs through in detail how you can apply all ten One Planet Living principles comprehensively and coherently using a school-wide approach.

For each principle consider:

- Goals - and the key outcomes you want to achieve
- Actions - addressing each principle in terms of curriculum, campus (operations) and community (wider stakeholder engagement)
- Monitoring – information which you will track to help you monitor implementation. This information can be qualitative (stories and images) and quantitative (things you want to measure)

- Indicators – some of these will be very important and you can call key performance indicators (KPIs). You should also set targets for some of these.
- Opportunities you can take advantage of, or challenges you need to address.

For each One Planet Living principle, Bioregional has set One Planet Living goals so that everyone engaging with One Planet Living can head in the same direction. These enable us all to see how we are contributing to the common and ultimate goal: everyone, everywhere leading happy and healthy lives within the natural limits of our one planet. You can set your own specific outcomes you might want to achieve under each goal; eg to have a certain percentage of students from a particular income group as an outcome under the “promote diversity and equality of opportunity” goal of the ‘Equity and local economy’ principle.

Using the goals as your guide, you are free to create your own set of actions to rise to the challenge of One Planet Living. The actions section in your One Planet Action Plan is the most important part. This is what you will actually do.

The One Planet Living principles all interconnect; many actions can be placed under more than one principle. For example, an action to reduce food waste could go under the ‘Local and sustainable food’ or ‘Zero waste’ principles. This is a good sign. The more connected your actions, the more joined-up your proposed solutions. We recommend placing each action under only one principle, but cross-referencing it to other principles where this is useful.

We have suggested some indicators, KPIs and targets. Indicators enable you to collect useful information to track how you might be doing. KPIs are indicators which can be particularly significant and we have suggested some KPIs for each principle. You may set yourself targets associated with these indicators, but even without a target an indicator can be extremely useful because it will indicate whether you are headed in the right direction. For example, you might want to track how much physical activity students and teachers engage in but it might not be particularly useful to set a rigid target for this. Targets are specific measures of performance to be achieved by a specific time, such as to obtain 100% of all energy supplies from renewable sources by 2020.

You may want to use some of our suggested indicators, KPIs or targets or you can make your own and make them useful and meaningful for your school community. But bear in mind, sustainability isn’t just about measurement; it is as much about engaging people’s hearts as their minds. The human element is just as important. So gather stories, anecdotes and other qualitative data to help understand and communicate your progress or learning and to inspire others.

Remember – this is your One Planet Action Plan so, for example, you can set your own targets. However, if you want your action plan to be recognised for demonstrating leadership by Bioregional, it will need to contain a comprehensive and exemplary set of actions to promote the goals of each of the principles. You will need to set a ‘Zero carbon energy’ target (100% renewable energy) by an ambitious date in line with what science tells us is necessary and depending on your context.

Your One Planet Action Plan

The next section lays out the ten One Planet Living principles, providing the detail on the One Planet Living goals and guidance on indicators, KPIs and targets. We describe what each principle means in practice and include some tips we have picked up from our experience and that of others who are using One Planet Living.

Your action plan needs to respond to each of the principles and describe what you want to achieve, how you will implement the actions and how you will monitor them. Good luck!



Section Two: Goals and guidance



Health and happiness

Encouraging active, social, meaningful lives to promote good health and wellbeing.

One Planet Living goals

- To increase or support high levels of physical, social, mental and emotional health
- To increase or support high levels of happiness and wellbeing

Guidance



You are probably doing a lot to promote health and happiness already, so start by cataloguing what you are doing now. There are a huge number of actions you can include so don't get overwhelmed but build steadily on what you are doing.

Key determinants of health and happiness include diet, exercise, interpersonal relationships and involvement in the wider community and the civic life that surround the school.

One Planet Schools increase and maintain high levels of physical, social and emotional health throughout the student body, faculty, and wider school community, as well as promoting self-care, happiness, and wellbeing. They make it easy for all students and employees to keep healthy and active at all ages. They are places where all people feel part of a safe, inclusive and supportive community. Consider putting in place a social media policy and school charter about bullying.



You can encourage interaction with nature and provide opportunities for spiritual and artistic development. Make space for play and fun. All these considerations can be used to inform your curriculum, the design and operation of the buildings and spaces within your campus. They can also inform how your school supports the wider community and how the wider community supports your school.

When thinking about your campus, look to ensure your buildings are designed or adapted to allow natural daylight to provide comfort, efficient temperature control and good ventilation. Use construction materials which are healthy and 'earth-conscious', for example avoiding volatile organic compounds (VOCs) which damage health and contribute to air pollution. Design gathering spaces to be safe, inclusive and welcoming to the community. Select facilities and activities to offer multiple benefits to physical and emotional health. Growing food, for example, can increase contentment as well as supporting a healthy diet. Art and educational projects can be displayed to engage visitors and showcase the work of students.

Think of your school as a key part of the community and a resource for everyone. Connect your school to its surrounding neighbourhoods with pedestrian and cycle routes. Provide space for physical activity for the wider community. Think about how your school can be a resource for learning, growth and wellbeing for the community as a whole, not just students – by supporting lifelong learning through sport and practices like mindfulness.

KPIs

- Average levels of reported satisfaction of students and staff
- Percentage of students and staff satisfied with their health and/or wellbeing

Indicators

- Percentage of students and staff engaged in at least 30 minutes of exercise per day
- Percentage of students and staff free from obesity or malnutrition
- Percentage of students, staff and parents engaged regularly in practices which improve mental health such as meditation, mindfulness, play or similar activities
- Number of complaints about bullying
- Percentage of students and staff who feel their lives are meaningful for themselves and others
- Percentage of students who are hopeful about the future
- Percentage of staff satisfied with the school as a place of work
- Percentage of students who feel that they have a trustworthy adult they can talk to
- Percentage of students who pay attention to the food they eat, and try to eat healthily
- Daylight factors for buildings
- Percentage of students, teachers and all other employees who are satisfied with the (a) summer indoor air temperature, (b) winter indoor air temperature, (c) ventilation and air quality, (d) noise, (e) natural daylight and (f) artificial daylight in their building
- Percentage of students who are satisfied with the local area as a place to live
- All purchases of paint and cleaning products etc 100% VOC free
- Levels of air pollutants within the school grounds or surrounding area

Targets

- Annually increasing or sustained high levels of reported average satisfaction levels of students, teachers and other employees

Stories and images

- Have students become healthier? Are students or staff engaging in mindfulness, play or similar practices?
- Do you have pictures of people enjoying themselves at great school community events or community street arts?

Health and happiness with the [Mindful Life Project](#)

Mindful Life Project is an initiative based in Richmond, California and teaches mindfulness, yoga, expressive arts, and hip-hop/performing arts to elementary and middle school students in disadvantaged schools and communities. They have two regular school-day mindfulness programs that teach self-awareness, self-regulation, impulse control, confidence and resilience. Since 2012 it has served over 9,000 students. Their goal is to empower students and teachers to develop a strong mindfulness practice that creates the healthiest educational ecosystems where compassion, empathy, kindness are the norm.

Top tip

Consider creating an One Planet Action Plan where there is at least one activity under each of the other One Planet Living principles which will positively increase health and happiness. Are there any actions in your plan which might decrease health and happiness, and if so, how can you reduce or eliminate the negative impact?



Equity and local economy

Creating safe, equitable places to live and work which support local prosperity and international fair trade.

One Planet Living goals

- To promote diversity and equality of opportunity across all abilities, gender, race, age and sexual orientation
- To help support the creation of a vibrant and resilient economy where a significant proportion of money is spent locally
- To promote international trade that is conducted fairly and without exploitation

Guidance



One Planet Schools are involved with the local community and aim to make socially and environmentally sustainable purchasing decisions. They celebrate diversity and foster a sense of inclusion throughout the curriculum, campus and community. As you develop your One Planet Action Plan, think about recognising the needs of local people, the elderly, young people, people with disabilities, single parents and families.

Consider how best to address bullying. Work to ensure that racial, sexuality and gender diversity are accepted and provide support for those who want to talk. Address the needs of low-income families perhaps by providing tuition-free education and/or scholarships opportunities and free or reduced-cost meals.

How can your curriculum promote 'Equity and local economy'? Which subjects can relate to this principle? Can students help with reviewing or developing the curriculum with respect to 'Equity and local economy'? Can students and teachers get involved in identifying local suppliers for products and services – and even support them in introducing better environmental and social practices?

As a school, you are an important employer. Consider how jobs can be accessible to as diverse a group as possible including local people and disadvantaged groups. One Planet Schools contribute to the local economy by considering local suppliers and contractors for construction projects, campus operations, and purchasing school supplies.

Ensure that your purchasing avoids exploitation of people or the environment by, for example, selecting certified Fairtrade or responsibly sourced products and working with suppliers that are taking action to improve the social and environmental impacts of their operations and supply chains. Consider Fairtrade as an important part of the curriculum.

One Planet Schools create connections with surrounding businesses and non-profit organisations so that students can offer their time volunteering or gaining work experience through training or apprenticeships. Aim to support your local community. For example, where you have facilities on campus such as gathering or performing space, consider offering it as an event space for community groups, social enterprises and non-profit organisations.

KPIs

- Percentage of students from low-income families on scholarship or receiving free tuition
- Number of students receiving free or reduced-price meals
- Percentage of products purchased annually which are certified Fairtrade or from local suppliers

Indicators

- Proportion of employees on campus paid a living wage according to the local benchmark
- Income range for highest and lowest paid staff
- Proportion of students and staff who live locally (eg within a 10km radius)
- Number of times the school's gathering or performance spaces are used by non-profits, social enterprises and community groups
- Number of local businesses or non-profit organisations the school community is connected with
- Percentage of products and services purchased from local suppliers

Targets

- At least 25% of purchases by value to be made from local suppliers
- Affordable tuition and reduced-price meal plans provided for students from low-income households.

Stories and images

- Do you have any personal stories to share about new employees or training opportunities having been created with local people?
- Have any new connections been formed with local businesses or social enterprises?
- Are more families shopping locally or purchasing Fairtrade goods?
- Do you have any stories about students and/or families who have taken an opportunity provided by your school and benefited themselves and the community?



Equity and local economy at Credo School

Credo School is a public school that moved into SOMO Village, a One Planet Community in Rohnert Park, California in 2017. SOMO Village is a repurposed former data centre, which has been converted into a green business park employing over 1,000 people. Sharing the same campus as local green businesses offers the opportunity for students and businesses to learn from each other.

Credo students build relationships with local businesses and engage them in their One Planet Living activities. For example, Credo students connected with a local surf shop which gave them a discount on surf gear after the students had spent the morning cleaning up the beach.

Top tip

Use your purchasing power to engage supply chains as these represent a huge opportunity to promote environmental and social progress. Consider encouraging your suppliers to adopt the ten One Planet Living principles and start creating their own One Planet Action Plans. Perhaps older students can start getting involved with local businesses to help them adopt the One Planet Living principles. This will enable you to create your own 'One Planet Living economy' to help improve your own performance.



Culture and community

Nurturing local identity and heritage, empowering communities and promoting a culture of sustainable living.

One Planet Living goals

- To foster a sense of place and belonging
- To encourage active citizenship
- To enhance local culture, heritage and sense of place
- To nurture a culture of sustainability

Guidance



One Planet Schools support a vibrant culture and active community and add value to existing and surrounding communities. Think about how the whole curriculum, campus and school community can strengthen its connections to the wider community.

Aim to involve local people at an early stage by consulting them and involving them in creating your One Planet Action Plan. Your school can respond to the needs of the wider community as well your students and staff. Can your school provide facilities or learning opportunities for the wider community?



In your curriculum, nurture a new culture of sustainability where everyone is encouraged to both take responsibility and participate in working towards One Planet Living. Perhaps establish a training or education centre to support learning about sustainability and understanding of environmental challenges and opportunities.

One Planet Schools provide welcoming outdoor and indoor public space for students and sometimes the wider community to come together and socialise, while keeping students safe. Are there ways in which your school's outdoor spaces can be open to the community outside school hours, becoming focal points for neighbourly living? Promote a 'sharing economy' by facilitating car-sharing, car clubs, toy libraries, tool libraries and sharing apps.

One Planet Schools demonstrate the local cultural and natural heritage, for example by using traditional construction materials, public art or native planting. Become a part of, or host, local cultural events or become part of a local art trail.

One Planet Schools actively nurture a sense of community in their campus operations. Clear governance structures and site management systems are put in place incorporating One Planet Living principles. Consider enhancing the strength of the physical community by creating a virtual community for your school, for example through social media groups (if appropriate in light of your safeguarding policies). Celebrate local heritage, culture and distinctiveness through traditional arts or even craft markets, farmers' markets and exhibitions.

KPIs

- Percentage of school community members agreeing that people from different backgrounds get on well at the school
- Percentages of students, teachers and all other employees, familiar with the One Planet Living principles

Indicators

- Percentage of students who borrow and share things with fellow students
- Percentage of students, staff and parents aware of the ten One Planet Living principles
- Percentage of parents attending school community events
- Percentage of students and parents who have participated in school decision-making in the past 12 months
- Percentage of students, teachers and all other employees who have volunteered in the last 12 months
- Number of community activities or events held at the school in the past 12 months
- Number of students, teachers and other employees participating in community activities or events in the past 12 months
- Number and type of local cultural and heritage features incorporated into the school

Targets

- Four community events to be held each year
- All students, staff and parents introduced to concept of One Planet Living

Stories and images

- Have any student-led groups or activities started that help foster a greater sense of community?
- Have there been any intergenerational activities or events where students have learned from older people, and vice versa?
- Can you run a mini-competition to find the best image which conveys that the school is working towards One Planet Living? Are there any examples of an emerging culture of sustainability?

Culture and community with the [Muktangan schools](#)

The Muktangan schools started in the neighbourhoods of Mumbai, India where they provide education 'for the community, by the community'. 'Muktangan' means learning and growing together and the schools provide teacher training for the parents of the students so that they may also receive education and a way to support their children's learning. The Muktangan schools believe it is important to empower children and their parents to make change in their communities and help them get the education they need to make this possible.

Top tip

A design challenge could give the students, teachers and all other employees the opportunity to work together to create and collaborate on a vision for their future and that of their school community. For example, this could be a community mural, painting or sculpture.

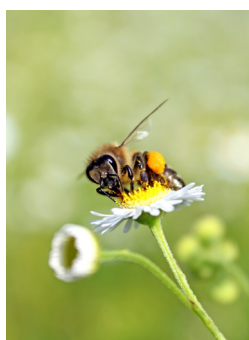


Land and nature

Protecting and restoring land and marine systems for the benefit of people and wildlife.

One Planet Living goals

- To ensure a positive contribution to local biodiversity
- To maximise carbon sequestration in the soil and biomass
- To maximise the synergies between agriculture, forestry, biodiversity and carbon storage
- To enhance 'ecosystem services' such as providing clean water and clean air
- To engage people in recognising the value of nature including its value to human health



Guidance

Humanity can have a positive impact on natural systems and wildlife. However, in modern society this is often not the case. For example, due to the rapid growth of consumption and population, productive land and sea (which provides essential services to people such as food, freshwater and protection from flooding or drought) is being lost, as well as contributing to the loss of biodiversity.

One Planet Schools ensure that the curriculum, campus and engagement with the wider community helps protect and restore natural systems for the benefit of people, local wildlife and the biosphere (the living part of our planet). How land is managed can greatly influence how much carbon it can store, or sequester, as biomass (growing trees) or as organic matter in the soil. The links between agriculture, forestry, biodiversity and carbon storage are very important ones. There are many opportunities to ensure that how we manage land to meet our needs for food, timber and fibre can also benefit wildlife and increase the potential to absorb carbon dioxide from the atmosphere.



One Planet Schools are not built directly on protected or ecologically sensitive sites. Wherever possible they are built on previously developed land or degraded land (brownfield sites). Key species of plants and animals which are locally, nationally or internationally significant are identified and plans put in place to enable them to thrive. Onsite, 'ecosystems services' (services which nature provides us with, such as soil building, clean water, clean air, preventing flooding or overheating in built-up areas (the heat island effect), provision of food and natural materials, cultural and recreational services) are identified and then maintained or enhanced.

When building on green sites, One Planet Schools aim to create as little damage as possible to existing natural value. They are also designed to increase 'ecological value' after construction, for example by providing a net benefit to wildlife, coastal ecosystems and freshwater management. Planting schemes benefit local wildlife and avoid invasive species.

Opportunities for education on the value of land and nature are integrated into campus operations via activities such as talks and lessons, tree planting and making nest boxes for birds. One Planet Schools also support biodiversity in the local area by identifying nature reserves nearby and promoting them to the wider school community.

As a One Planet School, you can engage with your supply chain on conservation. Products and materials that damage natural habitats are avoided, such as timber which is not certified as being sustainably sourced, or compost which uses peat extracted from threatened and high-value peat bogs.

KPIs

- Numbers of local species found on campus (such as plant or bird species)
- Percentage of land area that has functional green surfaces (performing at least two functions such as water management, recreation, biodiversity, food growing, carbon storage, or cooling (eg tree coverage))

Indicators

- Number of bird-nesting boxes, bat boxes or insect hotels on campus
- Number of students involved in nature surveys
- Percentage of new construction built on previously developed land
- Percentage of previously developed land returned to agriculture or natural habitat
- Capacity of land to absorb carbon, or other 'ecosystem' service such as water management

Targets

- Number of natural species recorded onsite to increase year by year

Stories and images

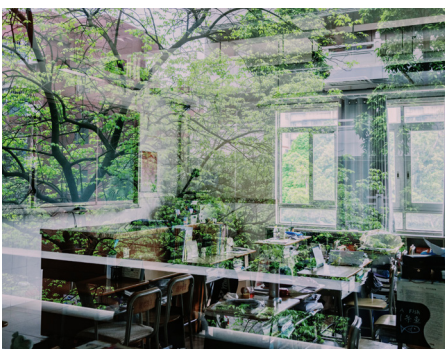
- Has anyone joined a local conservation group or started a conservation volunteering group onsite? Can students and teachers collect a photo library of wildlife seen onsite?
- Are people more aware of wider conservation issues and their impacts – has the school switched to buying peat-free compost or does it make its own?

Land and nature with [Forest Schools](#):

The 'Forest School' concept originated in Scandinavia in the late 1970s and has since been adopted by many countries across the world. Forest Schools are a system of schooling designed to integrate social, emotional and personal skills through nature-based learning. In this setting, children are able to connect with nature, exercise, play and learn.

Top tip

Evidence suggests that contact with nature is good for mental health and will ultimately increase economic productivity and resilience. Consider incorporating functional green areas which staff can participate in and enjoy (eg food growing space or beehives).





Sustainable water

Using water efficiently, protecting local water resources and reducing flooding and drought

One Planet Living goals

- To provide clean and free drinking water
- To use water efficiently and return it clean to the environment
- To contribute to sustainable water management, flood risk and drought mitigation in the surrounding area



Guidance

One Planet Schools incorporate sustainable water use into the taught curriculum and educate students and stakeholders about their local water sources. Water management needs to reflect your specific local situation and demands solutions specific to the particular location. In many parts of the world, clean water is not an abundant resource available to everyone. As climate change occurs and the earth's population increases, it is likely that even more areas will become 'water-stressed' or prone to flooding.

The process of storing, treating and transporting water has a wide range of environmental impacts and a carbon footprint, even in water-rich areas, so it should always be used efficiently. Consider fittings and appliances such as taps, toilets and showers which are water-efficient. In water-poor or water-stressed areas or if you have dry seasons, consider collecting and using rainwater – especially for flushing toilets and/or irrigation. One Planet Schools may recycle greywater (from showers and sinks) or even blackwater (sewage) onsite. Check there is a clear net environmental benefit as onsite water treatment may use more energy and chemicals than conventional sewage treatment.

Design the landscape to support water management in the wider area, whether by mitigating flooding (eg through 'sustainable urban drainage' or green roofs) or avoiding drought (eg through swales and retention ponds).

Consider how you can help students and staff use water wisely through information, education, encouraging behaviour change and creating a culture of sustainable living. Set water consumption targets based on good local practice and alert students and staff to their consumption – eg feeding back site-wide figures. Engage parents and other stakeholders in water-conscious behaviour.

KPIs

- Average per capita potable water consumption for students and staff (litres per day or month; or gallons per day or month)
- Total annual potable water consumption

Indicators

- Percentage of water used on campus from rainwater harvesting
- Percentage of campus area that is conserved as wetland or aquatic habitat (eg ponds, streams)
- Percentage of waste water that is recycled on campus
- Ratio of impermeable to permeable area that accommodates storm water infiltration
- Percentage of land planted with drought-resistant species

Targets

- Selected on very local basis, eg water use of no more than 5 litres per student per day

Stories and images

- Has the school changed its planting and irrigation system, or installed its own rainwater harvesting equipment?
- Are students engaged in maintaining and enhancing the site's water features, like retention ponds, and are they enjoying them?

Sustainable water at Thacher High School

Located in Ojai, California Thacher High School is doing all it can to conserve water. Since it started a sustainability programme to track the school's total water use, the residential school community has managed to reduce its water needs by 48%. They achieved this mainly by installing low-flow facilities in dorms and faculty homes, upgrading irrigation systems, using greywater from the laundry to irrigate trees and designing rainwater catchment systems for its roofs.

Top tip

Good water management is a very local issue so develop a good local understanding to get the best solutions and results. Don't recycle water for the sake of it – make sure it is a good idea in your location. Make good links with your local municipality or water authority and find ways to work with them.





Local and sustainable food

Promoting sustainable, humane farming and healthy diets which are high in local, seasonal, organic food and vegetable protein.

One Planet Living goals

- To make it easy and attractive for people to enjoy fresh, local, seasonal, healthy produce
- To promote diets high in vegetable protein
- To promote sustainable farming which supports biodiversity and builds soil
- To promote humane farming
- To reduce or eliminate food waste

Guidance

Food and food growing has a huge impact on a range of issues including physical and mental health, culture, heritage, climate change, biodiversity and the local economy. It represents about one quarter of our ecological footprint. Obesity levels in many poor as well as rich countries are rising and high levels of meat consumption, in particular of red meat, are associated with a large ecological footprint and a range of poor health outcomes including cancer. The greenhouse gas emissions from global meat and dairy production are as large as all emissions from transport. Natural habitats are being lost as cropland and grazing land expand, with increased meat and dairy production contributing heavily to this loss.

One Planet Schools support a food culture which is healthy and sustains wildlife-friendly agriculture, conserving and building soils to absorb carbon dioxide. Can you include local and sustainable food issues as part of your curriculum – not only in cooking lessons and personal wellness but also in biology, geography, chemistry, citizenship, economics and even history? Perhaps connect with a local farmer and explore the links between personal health and how food is grown.

Again, don't get overwhelmed but start small and build a set of 'Local and sustainable food' actions over time. When designing or operating a One Planet School, consider space for a school garden where the students can learn to grow their own food for healthy school lunches (checking for any soil contamination if there is a potential risk of toxins, such as from being near a busy road or if the site was previously industrial). Gardening has been shown to improve your mood so encourage the planting of edible landscaping (ie plants that produce food), food forests and community orchards. Wherever possible consider growing plants on campus that are easy to pick and good for snacks between classes. Start composting green waste and use the compost to fertilise the crops. You might even consider a space for farmers' markets at the weekend and perhaps sell food grown at the school.

Food can be a major source of food waste and packaging waste. Think about ways to reduce food waste, perhaps by finding ways to sell or give away perishable food at low cost at the end of the day or after school events. Try not to use disposable packaging and cutlery.

Encourage the shops, restaurants and cafes that surround the school community to offer local, sustainable, healthy food and vegetarian or low-meat options – or to create their own One Planet Action Plans. For school meals, when meat, poultry and fish are served, encourage smaller quantities which are high-quality, humanely raised and sustainably produced or harvested.

Consider banning the sale of sugary drinks. Celebrate a culture of healthy and sustainable eating through events, information and education.

KPIs

- Food growing space (m² per student)
- Percentage of students gardening or food growing at least once per week
- Percentage of students and teachers who regularly choose (a) vegetarian or vegan food, (b) sustainable fish, (c) local and/or seasonal and/or organic fruit and vegetables, (d) ethical meat, eggs and dairy and (e) fairtrade-certified products

Indicators

- Number of edible fruit-bearing trees and shrubs planted on campus
- Number of sugary drinks sold per week or per annum
- Number of outlets in the surrounding area selling sugary drinks
- Food waste per person (per student per annum) and percentage being composted
- Percentages of students and teachers who are (a) vegetarian or mostly vegetarian or (b) for meat-eaters: average number of meals per week which include meat
- Percentage of school meals which are (a) vegetarian (b) include sustainable fish, (c) include local and/or seasonal and/or organic fruit and vegetables, (d) include ethically-sourced meat, eggs and dairy and (e) include fairtrade-certified products
- Estimated impact from diets (kgCO₂e per person per year or global hectares per person per year)

Targets

- Annual increase in school meals which are (a) vegetarian (b) include sustainable fish, (c) include local and/or seasonal and/or organic fruit and vegetables, (d) include ethically-sourced meat, eggs and dairy and (e) include fairtrade-certified products.
- Establishment of ethical and sustainable procurement policies covering all food and beverage categories
- 50% of food used, consumed or sold by value or weight to be from local sources (e.g. 50km radius)

Stories and images

- Is anyone buying more organic or free-range food, and if so why?
- Do you have any great pictures of people enjoying themselves at your school's farmers' market?
- Do you have any nice pictures of students working in the garden?

Local and sustainable food with [The Edible Schoolyard](#)

The Edible Schoolyard Project started in New Orleans, USA in 2006 in the aftermath of Hurricane Katrina. The goal for this project is to help students build a healthy relationship with their food, themselves, their community and the natural world around them. This hands-on educational programme involves students in all aspects of growing, harvesting, preparing and enjoying food together. In doing so they awaken their senses and cultivate a school environment that promotes a sense of pride and responsibility for the land and natural resources while developing a love for fresh, seasonal foods. There are now edible schoolyard projects popping up all over the United States.

Top tip

Food can be a great way to support local prosperity. Mapping local food producers can enable you to identify places to access low-cost local food.



Travel and transport

Reducing the need to travel, encouraging walking, cycling and low-carbon transport.

One Planet Living goals

- To reduce car dependence
- To make it easy and attractive to walk and cycle
- To promote car-sharing (including car clubs) and public transport
- To promote low/zero-carbon vehicles including electric cars
- To raise awareness of the impacts of, and promote alternatives to, air travel



Guidance

Schools and their surrounding communities are generally healthier, happier, more neighbourly and more attractive when they are not dominated by roads and cars. The largest environmental impact of school communities is often the carbon footprint of students travelling to and from campus. An overly car-dependent society contributes not only to carbon emissions and air pollution but also takes up valuable land for roads, reduces the attractiveness and safety of the public realm and promotes obesity and respiratory illness, particularly in children. In many places, commuting – especially the ‘school run’ – is one of the main contributors to reported unhappiness.

Envision your One Planet School as a place where people can walk and cycle easily and where it is easier to live without a car. The neighbourhoods surrounding the school can be attractive and ‘permeable,’ making walking and cycling the most convenient mode of transport. Create a green transport plan including access to wider pedestrian and cycle networks, public transport nodes and car-sharing. Make bicycle storage easy and safe on campus. Perhaps students can be provided with cycle maintenance kits and lessons, or a school bus service can be introduced. Promote low/ zero-emission vehicles such as electric cars, for example by installing electric-charging points. Consider ways to make information on ride sharing (‘ride with your friends’), public transport and travel options easily available to people.

Incentivise travelling by low-carbon modes of transport such as taking the train or car-sharing. Consider getting the school community to offset their transport carbon emissions on a yearly basis. Work with your local planning authority to improve walking, cycling and public transport infrastructure which works for your students, staff and parents.

KPIs

- Number of students and staff walking or cycling to school
- Number of students ride-sharing to school
- Percentage of local journeys travelled by different modes of transport (walking, cycling, car, bus, train, metro)

Indicators

- Number of cycle storage spaces per student
- Number of electric vehicle charging points
- Proximity to different types of public transport
- Annual per capita transport CO₂ emissions per student travelling to and from school (kg CO₂e per student per year)
- Percentage of school vehicles which are electric or low/zero carbon emissions

Targets

- 70% of students walking, cycling or car-sharing to school
- 90% of student journeys less than one mile completed by walking or cycling

Stories and images

- What is the personal story behind a student, teacher or parent who is walking or cycling more?
- Has anyone got rid of a car; how do they feel about it?



Travel and transport with the 'Walking Bus'

Safety concerns and time availability are major barriers for children walking to school. One answer could be the development of a local 'Walking Bus.'

Parents and guardians volunteer to take it in turns to walk a group of children to school along a set route with meeting points and a timetable. This can also be done with children cycling to school. A number of schools across the world have adopted this initiative, including one in Scotland, UK (pictured) which found that it also helped tackle lateness and absenteeism.

Photo: BBC News

Top tip

Cars connect people over long distances but disconnect us from our neighbours and reduce the sense of community. Walk and cycle or ride share to reducing carbon emissions and create time to build health, happiness and stronger relationships.



Materials and products

Using materials from sustainable sources and promoting products which help people reduce consumption.

One Planet Living goals

- To promote sustainable living by making it easy to share and reduce consumption of natural materials
- To carefully consider every material and product and select them for their positive social and environmental benefit or for reducing negative impact
- To promote materials and products that are not toxic to humans or wildlife at any stage in their lifecycle, from raw material through to manufacturing, use and end-of-life

Guidance



One Planet Schools make it easy for their whole community to improve their quality of life while reducing their environmental impact. They support a collaborative, sharing economy. They prioritise materials and products with a low environmental impact across their lifecycle, and promote those which have positive social and environmental impacts, such as sustainable timber which stores carbon.

In your curriculum, help your students learn about materials and products and to consider a product's whole lifecycle. Students can learn about a product's length of life, sustainability of harvesting or production and local and reclaimed content.

In its daily campus operations, consider the pros and cons of different materials, especially composite ones (made from multiple materials) which may have extensive manufacturing requirements and which may be hard to recycle compared to simple natural materials. In construction of new school buildings, extensions or renovations, embodied carbon is a key indicator and offers the opportunity to lock up carbon through use of sustainably harvested timber and other organic materials such as straw bales. Aim to avoid high-impact or polluting materials such as PVC and high VOC content paints. Materials can also be conserved by creatively designing out conventional features such as suspended ceilings and reducing the areas of roads, parking and paved areas. Your engineers and architects can help you.

Think about putting in place strategies to enable the school community to reduce wasteful consumption and consume responsibly. A culture of sharing and swapping is encouraged through community facilities and services (such as tool and toy libraries) as well as via apps, online tools and social media, such as a Facebook page for the site.

Reach out to suppliers to engage them in helping you improve your sustainability performance. Ask them to help you create and implement your One Planet Action Plan and put in a One Planet Action Plan themselves.

KPIs

- Percentage of school purchases of materials and products by value which are sourced using sustainability criteria
- Estimated embodied carbon of new buildings (Kg CO₂e per m²) annualised over the anticipated lifespan of the buildings (eg 60 years)

Indicators

- Number of students, staff and parents engaged in community initiatives for sharing, selling, gifting or refurbishing used durable goods, such as community freecycle and garage sale events
- Percentage of products used, consumed or sold by weight or value during operation which are either reused or recycled
- Percentage (by volume or weight) of the construction material that is locally reclaimed or constituted from recycled material
- Proportion of timber or wood products which are reclaimed, reused or from a certified sustainable source
- Percentage of school products used, consumed or sold by weight or value during operation which are locally sourced (e.g. within a 50km radius)

Targets

- 100% of timber or wood products reclaimed, reused or from a certified sustainable source
- 100% of paper made from recycled fibre or from certified sustainable source.

Stories and images

- Are there any community-sharing initiatives – of tools, books, toys? Are there any new local repair initiatives or classes taught in the curriculum?
- Has anyone become more aware of the impact of their resource consumption?
- Has a reclaimed material been used creatively in construction?



Materials and products with the [Green School](#)

The Green School in Bali has one of the most interactive and sustainable curriculums and it is also built entirely from an eco-friendly, locally grown material: bamboo. Bamboo can grow up to 39 inches a day in tropical Bali. It is incredibly strong, carbon neutral, non-toxic and can be recycled back into fertile soil once a building reaches the end of its life cycle. Students also use bamboo for school projects like this bamboo bicycle.

Top tip

As a school community, you can use your purchasing power to transform your local economy. Engage suppliers and your local government to help you and to help them.



Zero waste

Reducing consumption, re-using and recycling to achieve zero waste and zero pollution.

One Planet Living goals

- To reduce wasteful consumption
- To maximise upcycling, reuse and recycling
- To aim for zero waste to landfill
- To avoid pollution and toxic emissions

Guidance

Waste can be considered a resource and can be part of the circular economy, so a One Planet School is designed around the waste hierarchy (see below).

Design, construct and operate for a healthy and happy school experience where wasteful consumption is reduced and ultimately aim for no waste.

Make waste part of your curriculum – from chemistry to technology and art classes – exploring where materials come from, what happens to them at the end of their lives and how materials flow through natural ecosystems.

In your campus operations, think about ways to design or redesign the waste system. Create clear signs to help students and staff understand what they can recycle and compost. Think about all waste including batteries and electronic waste. Educate students, staff and the wider community through fun events and activities to help them learn about their local landfill or energy-from-waste plant and where their trash goes. If there are existing buildings onsite which need to be demolished, work with the students to undertake an audit to identify what can be maintained, reclaimed, reused or recycled on campus.

Involve the whole school community (including parents and families) in planning a zero waste management plan. One Planet Schools foster a culture of sharing, upcycling, reuse and enable closed-loop recycling of products. Engage with your local government or waste authority, as well as local businesses, to see what opportunities exist to help you and for you to help them.



KPIs

- Percentage of waste diverted (sent for reuse, recycling or composting) in a given year (with and without energy-from-waste recovery)

Indicators

- Waste generated per student per year (kgs/student/year)
- Percentage of food waste generated
- Percentage of food waste re-used or recycled
- Annual total waste generated by the school (tonnes)
- Estimated total waste generated during construction of new building (tonnes)
- Total quantity and percentage of construction waste sent for reuse, recycling, composting or energy-from-waste recovery (tonnes)

Targets

- 100% of food waste composted
- At least 70% recycling or composting rates in operation
- Zero construction waste sent to landfill
- No more than 2% waste to landfill

Stories and images

- Are there any local composting initiatives on campus?
- Are there any images of students and teachers having fun with craft activities using recycled materials?



Zero waste at [Hug it Forward](#)

Hug It Forward is a grassroots organization that facilitates education and awareness by empowering communities in Latin America to build “bottle schools”. They have built 77 bottle schools using “eco-bricks”: plastic bottles stuffed with inorganic trash. Entire communities come together to build a more sustainable educational infrastructure for their future. The biggest bottle school is located close San Martin in Guatemala. It is called ‘Varituc’ meaning “place of trees.”

Top tip

Think about waste as a resource - waste materials generated at your school can often be reused in play or art projects.



Zero carbon energy

Making buildings energy efficient and supplying all energy with renewables.

One Planet Living goals

- Buildings are energy efficient compared to a local or national benchmark or a recognised standard
- 100% of energy consumed is supplied by non-polluting renewable energy generated onsite or offsite

Guidance

All buildings in a One Planet School are designed or aim to be retrofitted to be energy efficient to a local best practice standards, preferentially using passive methods (such as natural lighting and ventilation). Take the opportunity to benchmark or certify your buildings against a specified green building standard such as LEED, BREEAM or Green Star, or a national or local standard.

Acknowledging that many school buildings are already in existence and may have been built many years ago, think beyond the fabric of your buildings to its fittings, equipment and appliances. Choose energy-efficient options for lighting, computers and other equipment. Think about installing motion detectors which can switch off lights when buildings are not in use and also encourage energy-saving behaviour such as switching off appliances when they are not needed.

Having made the buildings energy efficient, plan for all the buildings in your One Planet School to run on renewable energy ('net zero carbon'). Think about onsite opportunities such as for solar panels or offsite sources such as wind energy purchased via a green tariff or 'power purchase agreement'. Power purchase agreements need to be robust and backed by a credible 100% renewable energy guarantee, so check them out first or get someone to help you. You may even think about owning or investing in renewable energy generation offsite. There may also be opportunities to set up or become part of a Community Energy Services Company (ESCo) or Energy Cooperative which can enhance local ownership and support a resilient and prosperous local economy.

Where it is not possible to get all your energy from renewables from day one, explain why, and put in place a strategy and set a target date for when you hope to achieve zero carbon.

One Planet Schools support a long-term strategy to be part of an area-wide renewable energy system – to create a locally resilient electricity grid run completely on renewable energy. One Planet Schools first look to generate renewable energy onsite or near site considering a range of factors. These include payback periods, competing uses (such as rooftop gardens competing with photovoltaics for space), local air pollution levels (which could be increased by burning carbon-neutral biomass in urban areas) and the opportunity to build or reinforce a culture of sustainability (eg through clearly visible solar panels). Install onsite equipment which directly consumes fossil fuels, such as gas boilers and diesel generators, only as a back-up or as a temporary strategy.

Nuclear power is a low-carbon energy source, but it is not renewable and creates waste, so does not count towards the zero carbon target for One Planet Living.

KPIs

- Percentage of energy consumed which comes from renewable sources, on and off site

Indicators

- Greenhouse gas emissions from school buildings compared to baseline (kgCO₂e per person per year and kgCO₂e per m² per year)
- Annual energy consumption, by energy type, for school buildings (kWh per student per year and kWh per m² per year)

Targets

- 100% renewable energy from day one of operation of a new school
- 100% renewable energy for an existing building by 2018
- 50% of annual demand in operation generated from onsite renewable energy

Stories and images

- Has the school noticed lower energy bills?
- Is anyone showing pride in having net-zero emissions? Is there a greater awareness of energy use?
- Are there images of people visiting the site to learn more?



Zero carbon energy with [South Fremantle High School](#)

In 2007, South Fremantle Senior High School in Australia started a school-wide effort to reduce its carbon emissions. After learning about climate change and greenhouse gasses it started a Carbon Neutral Project with the help of a program called Low Carbon Schools. Efforts to reduce CO₂ emissions have been deeply embedded into the curriculum and campus operations.

Students are involved in monthly activities from service learning projects, conservation efforts, tree planting, environmental studies and carbon neutral qualification and student achievement awards. They also recently built a 'solar stage' (pictured) for student's to use for performing arts.

Top tip

Consider the whole-life cost of investments – renewables or LED lighting may cost more upfront but will lead to significant savings across their lifespan.



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First written and published by
Bioregional

April 2017

Bioregional champions a better,
more sustainable way to live.
We work with partners to create
places which enable people to
live, work and do business within
the natural limits of the planet.
We call this One Planet Living.

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