



JANUARY

COMMIT TO MAKING A DIFFERENCE

Objectives:

- Learn what it means to become a steward of the environment
- Create awareness about the importance of conservation and sustainability
- Learn your carbon footprint

Vocabulary:

- Conservation – the preservation and careful management of the environment and of natural resources (dictionary.kids.net.au/word/conservation)
- Sustainability – refers to the idea that human activity should be guided by the principle that the welfare of the environment and of future generations should always be considered. (encyclopedia.kids.net.au/page/su/Sustainability)
- Pledge – a binding commitment to do or give (dictionary.kids.net.au/word/pledge)

Activity:

- Interview an adult asking them what they do to practice conservation and sustainability.
- Write about how they conserve and what you think they could do to improve it.
- Determine your carbon footprint using one of the following websites <http://www.iclimate.org/ccf/Files/footprint.pdf>
- <http://www.footprintnetwork.org/en/index.php/GFN/page/calculators/>
- <http://calc.zerofootprint.net/youth/>
- Write down the results in your journal.
- List things you already do to conserve at school, in the classroom and at home and share them with your classmates. Brainstorm new things you could do and pick one new thing that you will commit to do this month.
- Draw a picture of something sustainable you do and share with your class
- In your journal write down your pledge and keep track of how well you are doing in keeping it.
- Below is a list of the 12 themes we will be studying this year. Pick the 3 themes you find most interesting. Write to the City's Sustainability Coordinator to tell her which subjects you picked and why (c/o: Sustainability Coordinator, Planning Dept, PO Box 1409, Key West, 33041)

- o January – Commit to make a difference
- o February – Water Quality
- o March – Transportation
- o April – Water Conservation
- o May – Youth Leadership
- o June – Green Business
- o July – Green Buildings
- o August – Healthy Living
- o September – Land
- o October – Energy
- o November – Reduce, Reuse, Recycle, Rot – The 4 R's
- o December – Buying Power (Choosing Green businesses and products)

Pledge: I pledge to practice one new conservation activity each month. This month I pledge to: _____

Suggested websites

For teachers:

PIL WEBSITE

http://www.cabotcheese.coop/pages/community_and_you/wonder_wheel.php

<http://acespace.org/teachers/curricula?gclid=CPqRv4PhxrICFXGRPAodWmsAlQ>

<http://www.filtersfast.com/articles/Educators-Guide-to-Green-Lessons-and-Activities.php>



January: Take the Pledge

- SC.4.E.6.3 Recognize that humans need resources found on Earth and that these are either renewable or nonrenewable.
- SC.4.L.17.4 Recognize ways plants and animals, including humans, can impact the environment.
- SC.K.N.1.2 Make observations of the natural world and know that they are descriptors collected using the five senses.
- SC.1.N.1.1 Raise questions about the natural world, investigate them in teams through free exploration, and generate appropriate explanations based on those explorations.
- SC.2.N.1.1 Raise questions about the natural world, investigate them in teams through free exploration and systematic observations, and generate appropriate explanations based on those explorations.
- SC.3.N.1.1 Raise questions about the natural world, investigate them individually and in teams through free exploration and systematic investigations, and generate appropriate explanations based on those explorations.





FEBRUARY

WATER QUALITY

Objectives:

- To develop an awareness of water quality and what we do that can affect it.
- To learn how the water cycle is related to water quality

Vocabulary:

- Water quality – the chemical, physical and biological characteristics of water, usually in respect to its suitability for a designated use such as recreation, fishing, drinking, agriculture, and industrial.
- Water cycle – The cycle of evaporation and condensation that controls the distribution of the earth's water as it evaporates from bodies of water, condenses, precipitates, and returns to those bodies of water. Also called hydrologic cycle. <http://kids.yahoo.com/reference/dictionary/english/entry/water%20cycle>
- Waste water treatment plant – a facility that cleans water containing human or industrial waste <http://www.epa.gov/ogwdw/watertreatmentplant/flash/index.html>

Activity:

- Brainstorm and search the Internet to become aware of daily activities that can affect our water quality. Write them down in your journal.
- In your journal, make a list of activities you already do and share them with a classmate. Now brainstorm on what else you can do that will help water quality and pledge to do one of those this month. Share your pledge with your classmates. Keep track of how well you are doing in keeping your pledge in your journal.
- Create a poster showing 3 to 4 of these daily activities
- Research why the water cycle is important to our water quality
- Go to the beach or walk your neighborhood and pick up trash and make a list of the different types of litter you find that could end up in the sewer after a storm.
- Discover where the water goes when you flush your toilet by doing an internet search
- Go outside and see if there is an oil spot where your car is normally parked. If there is, your car could have an oil leak. This oil will be washed down the storm drain during a storm and will end up in the ocean where it can be harmful to wildlife.
- Watch the video to learn about waste water treatment <http://www.youtube.com/watch?v=tuYB8nMFxQA&feature=related>
- Learn about sunscreen that is biodegradable and environmentally friendly. To learn more about how sunscreens affect the reef go to:
 - <http://news.nationalgeographic.com/news/pf/82923650.html>
- Find out where in the Florida Keys you can purchase reef friendly sunscreen.
- Write a letter to a local civic group to tell them what you learned.
- Research pet waste as a water quality issue. Do a neighborhood survey and record your findings. Write a letter to your City Commissioners telling them your results.
- Revisit past pledges and review your progress in your journal.

Pledge: For Water Quality Month I pledge to: _____

Suggested websites:

PIL WEBSITE

- <http://water.epa.gov/learn/kids/drinkingwater/index.cfm>
- <http://www.pbs.org/teachers/ecoinvestigators/lesson-plans/freshwater/what-is-water/>
- <http://clean-water.uwex.edu/pubs/pdf/pet.pdf>
- <http://ecosystems.psu.edu/youth/sftrc/lesson-plans/water/k-5/storm-drain>
- <http://projectwet.org/water-resources-education/water-quality-education/>
- <http://extension.usu.edu/waterquality/htm/kidspage>
- http://teacher.scholastic.com/activities/studyjams/water_cycle/



February: Water Quality

- SC.2.E.7.3 Investigate, observe and describe how water left in an open container disappears (evaporates), but water in a closed container does not disappear (evaporate).
- SC.2.P.8.4 Observe and describe water in its solid, liquid, and gaseous states.
- SC.2.P.8.6 Measure and compare the volume of liquids using containers of various shapes and sizes.
- SC.1.E.6.2 Describe the need for water and how to be safe around water.
- SC.3.P.9.1 Describe the changes water undergoes when it changes state through heating and cooling by using familiar scientific terms such as melting, freezing, boiling, evaporation, and condensation.
- SC.4.P.8.2 Identify properties and common uses of water in each of its states.
- SC.5.E.7.1 Create a model to explain the parts of the water cycle. Water can be a gas, a liquid, or a solid and can go back and forth from one state to another.
- SC.5.E.7.2 Recognize that the ocean is an integral part of the water cycle and is connected to all of Earth's water reservoirs via evaporation and precipitation processes.





MARCH TRANSPORTATION

Objectives:

- Identify the various types of transportation available in the Florida Keys
- Find alternatives to help lower your fuel consumption
- Learn about the potential of alternative fuels to power cars

Vocabulary:

- Fuel – a substance that can be consumed to produce energy
- Transportation – the movement of people and goods from one place to another. (dictionary.kids.au)

Activity:

- See how many types of transportation you can list.
- List different ways to get to school and how you could use less fuel
- Interview your parents on how much they spend on gas for their transportation each month. List ways you could reduce this amount.
- Use a gas mileage calculator to figure out your parent's mileage to work verses taking the bus. . Use this calculator
- Use <http://kwtransit.com> to map a route from your house to a place of your choosing.
- Tour the Key West High School Alternative Energy Center
- Interview your classmates to see how they each get to school and make a bar graph to show the results.
- Design a car of the future using alternative power sources. Write a fictional article for the local newspaper describing your car.
- List things you already do to lower your fuel consumption and share them with your classmates. Brainstorm new things you could do and pick one new thing that you will commit to do this month.
- Write your pledge in your journal. Each day you walk or ride your bike record how many miles you traveled using
- <http://www.runningmap.com/>. At the end of the month total up how many miles you traveled. Divide this total by the miles per gallon (mpg) your car gets to see how many gallons of gas you saved. Multiply this by the price of a gallon of gas to see how much money you saved.
- Revisit past pledges and review your progress in your journal.

Pledge: For Transportation Month I pledge to: _____

Suggested websites:

PIL WEBSITE

<http://kwtransit.com/>

Bike Safety and rules in Key West:

www.keywestcity.com/egov/apps/directory/list.egov?path=divs&action=251&fDD=38-251

<http://www.footprintnetwork.org/en/index.php/GFN/page/calculators/>

<http://www.examiner.com/article/green-exotic-car-lesson-plans-offer-enrichment-student-curriculum-k-12-classroom-or-home-school>

<http://www.sciencenewsforkids.org/2011/10/cars-of-the-future/>

<http://exploringgreentechnology.com/green-living/alternative-fuels-for-cars/>

<http://auto.howstuffworks.com/fuel-efficiency/vehicles/solar-cars.htm>

March: Transportation

- SC.4.E.6.3 Recognize that humans need resources found on Earth and that these are either renewable or nonrenewable.
- SC.4.L.17.4 Recognize ways plants and animals, including humans, can impact the environment.
- SC.3.P.10.1 Identify some basic forms of energy such as light, heat, sound, electrical, and mechanical.
- SC.4.P.10.1 Observe and describe some basic forms of energy, including light, heat, sound, electrical, and the energy of motion.
- SC.5.P.10.1 Investigate and describe some basic forms of energy, including light, heat, sound, electrical, chemical, and mechanical.





APRIL WATER CONSERVATION

Objectives:

- Learn about why water conservation is important
- Determine ways to conserve water
- Learn about the importance of potable water

Vocabulary:

- Water conservation – the preservation and careful management of water resources
- Efficiency – not being wasteful
- Gray water – water from kitchen sinks, bathtubs, showers and washing machines that is not contaminated with human waste.
- Green shower – during a shower the act of turning off the water when you don't need it. For example turning off the shower when you are soaping your body or washing your hair.
- Potable water – water that is fit or suitable for human consumption

Activity:

- Research where our water comes from in the Florida Keys
- In your journal, make a list of as many activities you can think of that use water. Determine if the water needs to be potable or not for each activity.
- List things you already do to conserve water at school, in the classroom and at home and share them with your classmates. Brainstorm new things you could do and pick one new thing that you will commit to do this month.
- In your journal write down your pledge and keep track of how well you are doing in keeping it.
- Calculate how much water you use when taking a bath or shower using one of the following website. http://www.microsoft.com/education/en-us/teachers/plans/Pages/water_usage.aspx
- http://www.alternet.org/story/141751/how_much_water_do_you_use_here's_some_quick_numbers. Write this in your journal. Try to shorten the time you run the shower or bath water by one minute. Calculate how much water you will save in a week, month and year. Keep a log in your journal.
- Calculate your water footprint using the following website:
- <http://environment.nationalgeographic.com/environment/freshwater/water-footprint-calculator/>
- Contact your local water authority and ask about obtaining low flow shower head and faucet attachments
- Make a poster to promote water conservation
- Go to the following website to learn ways to conserve water:
- <http://www.wateruseitwisely.com/100-ways-to-conserve/index.php>
- Play the following game to learn about how to save water at home:
- <http://www.wateruseitwisely.com/kids/>
- Revisit your past pledges and review your progress in your journal.

Pledge: For Water Conservation Month I pledge to use less water by: _____

Suggested websites:

PIL WEBSITE

<http://www.teachersdomain.org/resource/ess05.sci.ess.watcyc.h2otreatment/>

http://www.teachersdomain.org/asset/ess05_vid_conserve/

<http://www.sandiego.gov/water/conservation/kids/>

<http://www.keepbanderabeautiful.org/bearspringsblossom/water-kids.html>

April: Water Conservation

SC.2.E.7.3 Investigate, observe and describe how water left in an open container disappears (evaporates), but water in a closed container does not disappear (evaporate).



- SC.2.P.8.4 Observe and describe water in its solid, liquid, and gaseous states.
- SC.2.P.8.6 Measure and compare the volume of liquids using containers of various shapes and sizes.
- SC.1.E.6.2 Describe the need for water and how to be safe around water.
- SC.3.P.9.1 Describe the changes water undergoes when it changes state through heating and cooling by using familiar scientific terms such as melting, freezing, boiling, evaporation, and condensation.
- SC.4.P.8.2 Identify properties and common uses of water in each of its states.
- SC.5.E.7.1 Create a model to explain the parts of the water cycle. Water can be a gas, a liquid, or a solid and can go back and forth from one state to another.
- SC.5.E.7.2 Recognize that the ocean is an integral part of the water cycle and is connected to all of Earth's water reservoirs via evaporation and precipitation processes.





MAY YOUTH LEADERSHIP

Objectives:

- To have students choose an environmental project to complete with support from parents or teachers
- To determine the impact of all the green activities the student has pledged to implement over the school year.

Vocabulary:

- Leadership – the position or function of a leader, a person who guides or directs a group
- Stewardship – the responsible overseeing and protection of something considered worth caring for and preserving

Activity:

- Brainstorm with a parent, teacher or classmates to determine an environmental project you can complete
- List steps to be taken and materials needed to complete the project
- Complete the project making sure to take pictures to share
- Write a paragraph about your project and send it with a picture to the City of Key West Sustainability Coordinator to have your project displayed on the Preserve Island Life website.
- Using your journal, look at the pledge you made each month. Write a summary of the impact of each pledge.
- Re-calculate your carbon footprint since implementing the green activities you've chosen over the past year.

Pledge: I pledge to tell people about my project and challenge others to complete an environmental project too.

Suggested sites for project ideas:

<http://www.marylandpublicschools.org/MSDE/programs/servicelearning/environment>

<http://www.dosomething.org/green-your-school/project-ideas>

<http://www.teachervision.fen.com/environmental-education/teaching-methods/63270.html>

May: Youth Leadership

- SC.4.L.17.4 Recognize ways plants and animals, including humans, can impact the environment.
- SC.5.N.1.1 Define a problem, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigations of various types such as: systematic observations, experiments requiring the identification of variables, collecting and organizing data, interpreting data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.
- SC.K.N.1.2 Make observations of the natural world and know that they are descriptors collected using the five senses.
- SC.1.N.1.1 Raise questions about the natural world, investigate them in teams through free exploration, and generate appropriate explanations based on those explorations.
- SC.2.N.1.1 Raise questions about the natural world, investigate them in teams through free exploration and systematic observations, and generate appropriate explanations based on those explorations.
- SC.3.N.1.1 Raise questions about the natural world, investigate them individually and in teams through free exploration and systematic investigations, and generate appropriate explanations based on those explorations.





JUNE GREEN BUSINESS

Objectives:

- Learn what makes a business green

Vocabulary:

- Green business – business who seek to preserve environmental quality, promote social equity, and stimulate sustainable economic growth.

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Activity:

- Using the Internet, explore the various types of green businesses and make a list of the 5 you find interesting.
- Find two local businesses who have gone green.
- Choose one type of business from the list you would like to open. Write a paragraph explaining why this business appeals to you and the importance of this type of business in helping us preserve island life. Include in your paragraph the different ways you will green your business.
- Draw a small poster about ways a business can go green.
- Write a letter to a local business that you would like to go green. Tell them why you think they should go green and how it could help their business.
- List ways you support green businesses (or do not support non green businesses) and share them with your classmates. Brainstorm new things you could do and pick one new thing that you will commit to do this month.
- In your journal write down your pledge and keep track of how well you are doing in keeping it.
- Revisit past pledges and review your progress in your journal.

Pledge: For Green Business Month I pledge to: _____

Suggested websites:

PIL WEBSITE

<http://www.keysglee.com/index.cfm/green-business/>

<http://greenforall.org.s3.amazonaws.com/pdf/cap/10%20Green%20Business%20Ideas.pdf>

June: Green Business

- | | |
|-------------|--|
| SC.4.E.6.3 | Recognize that humans need resources found on Earth and that these are either renewable or nonrenewable. |
| SC.4.E.6.6 | Identify resources available in Florida (water, phosphate, oil, limestone, silicon, wind, and solar energy). |
| SC.2.P.10.1 | Discuss that people use electricity or other forms of energy to cook their food, cool or warm their homes, and power their cars. |
| SC.1.E.5.4 | Identify the beneficial and harmful properties of the Sun. |
| SC.5.P.10.4 | Investigate and explain that electrical energy can be transformed into heat, light, and sound energy, as well as the energy of motion. |





JULY BUILDINGS

Objectives:

- Learn about how to renovate or build more environmentally friendly buildings.
- Learn about how different parts of the home can be made more green and save families money

Vocabulary:

- Green architecture – is a broad term that refers to the creation or restructuring of buildings so they have a minimal impact on the environment. (<http://www.wisegeek.com/what-is-green-architecture.htm>)
- Solar power – energy from the sun that is converted into thermal or electrical energy (<http://dictionary.kids.net.au/>)
- Solar panels – a group of solar cells forming a flat surface
- Rain barrels – a barrel used as a cistern to hold rainwater
- Cistern – a tank that holds water
- Insulation - a material that reduces or prevents the transmission of heat or sound or electricity (<http://dictionary.kids.net.au/>)
- Energy vampire – the electric power consumed by an electronic device or appliance while it is off or in standby mode.

Activity:

- List things you already do to conserve energy at school, in the classroom and at home and share them with your classmates. Brainstorm new things you could do and pick one new thing that you will commit to do this month.
- In your journal write down your pledge and keep track of how well you are doing in keeping it.
- Find out the types of eco friendly and sustainable building products architects incorporate into green buildings.
- Use the Internet to learn about easy things you can do to your house to make it more energy efficient.
- Build a diorama of a house or building using examples of green architecture. List the green innovations you used and why.
- Research how a solar panel transforms sunlight into energy.
- Pick one room in your house and draw a picture of the room showing all the devices that use electricity. Determine whether the device is an “energy vampire”.
- In your journal, make a list of devices that are considered “energy vampires”. Calculate how much energy one energy vampire device uses when you are not using it.
- Ask your parents to schedule a free home energy audit with Keys Energy Services or your local electric company.
- Visit Keys Energy’s website to learn of renewable projects being conducted in the Florida Keys. <http://www.keysenergy.com/renewable-energy.php>
- Take a tour of a LEED building. In Key West, visit the National Weather Station on White Street or NOAA EcoDiscovery Center office located at the Truman Waterfront.
- Revisit past pledges and report on how well you are doing in your journal.

Pledge: For Building Month I pledge to: _____

Suggested websites:

PIL WEBSITE

<http://www.wisegeek.com/what-is-green-architecture.htm>

<http://architecture.about.com/od/greenconcepts/g/green.htm>

www.nreca.coop/programs/CRN/Documents?Vampire%20loads.pdf

http://c03.apogee.net/contentplayer/templates/kids/pdf/EnergyEfficiency_LetsSave.pdf

http://energyquest.ca.gov/saving_energy/index.html

July: Buildings

- SC.2.P.10.1 Discuss that people use electricity or other forms of energy to cook their food, cool or warm their homes, and power their cars.
- SC.4.E.6.3 Recognize that humans need resources found on Earth and that these are either renewable or nonrenewable.
- SC.4.E.6.6 Identify resources available in Florida (water, phosphate, oil, limestone, silicon, wind, and solar energy).
- SC.1.E.5.4 Identify the beneficial and harmful properties of the Sun.
- SC.5.P.10.4 Investigate and explain that electrical energy can be transformed into heat, light, and sound energy, as well as the energy of motion.





AUGUST HEALTHY LIVING

Objectives:

- To create an awareness of where foods come from and how far they travel
- Learn about why green cleaning products are better for our environment and people
- Learn how the choices you make on what to eat each day affects the planet

Vocabulary:

- Local foods – food that is grown within a 100 - 225 mile radius from where it's sold
- Healthy lifestyle – best defined by “5-2-1Almost None”. This means 5 servings of vegetables and fruits per day, less than two hours of television and computer time per day, one hour of exercise per day and consuming almost no drinks with sugar. (<http://www.livestrong.com/article/372444-definition-of-a-healthy-lifestyle-for-children/>)
- Green cleaning – products that have less of an impact on the environment or are less detrimental to human health than traditional equivalents.

Activity:

- Brainstorm how biking and walking are beneficial to people and the environment and make a list.
- Research how different foods are good or bad for your health. Compare this list to what you ate yesterday for your three meals.
- Research and list the fruits and vegetables grown in south Florida.
- Research the carbon footprint of different types of foods <http://sarasota.ifas.ufl.edu/AG/FoodChoiceCarbon.pdf>
- Pick one meal you eat, write down every item and add up the carbon footprint of your meal. List as many ways as you can to reduce this number.
- Research seafood from the Florida Keys and it's sustainability.
- Find out why it's recommended that some seafood should be eaten less often than others.
- Research the Dirty Dozen and Clean 15 by Environmental Working Group
- Find 3 cleaning products in your home and search the Internet to see if there are green products that can replace them.
- Look for ways you can make your own products from such household staples as vinegar and baking soda.
- Make a small poster about one thing you have learned about healthy living.
- Write a letter to the school board about what you have learned about healthy living.
- List things you already do to live healthy at school and at home and share them with your classmates. Brainstorm new things you could do and pick one new thing that you will commit to do this month.
- In your journal write down your pledge and keep track of how well you are doing in keeping it.
- Revisit past pledges and report on how well you are doing.

Pledge: For Healthy Living Month, I pledge to: _____

Suggested websites:

PIL WEBSITE

<http://tiki.oneworld.net/food/food2.html>

<http://www.livestrong.com/article/372444-definition-of-a-healthy-lifestyle-for-children/>

<http://www.sustainabletable.org/schools/teachers/>

<http://gardenabcs.com/uploads/foodmiles.pdf>

http://www.nrdc.org/oceans/seafoodguide/default.asp?gclid=CKbU_aPwxrICFXGRPAodWmsAlQ

http://www.superkidsnutrition.com/nutrition_answers/of_benefitsproduce.php

<http://greenliving.nationalgeographic.com/define-green-cleaning-2513.html>

<http://www.parents.com/parenting/better-parenting/green/green-cleaning/>

August: Healthy Living

- SC.4.L.17.2 Explain that animals, including humans, cannot make their own food and that when animals eat plants or other animals, the energy stored in the food source is passed to them.
- SC.2.L.17.1 Compare and contrast the basic needs that all living things, including humans, have for survival.
- SC.2.L.17.2 Recognize and explain that living things are found all over Earth, but each is only able to live in habitats that meet its basic needs.
- SC.1.L.17.1 Through observation, recognize that all plants and animals, including humans, need the basic necessities of air, water, food, and space.





SEPTEMBER LAND

Objectives:

- To identify native plants in the Florida Keys
- To identify invasive plants in the Florida Keys
- To identify how native plants help sustain the ecosystem
- To learn how our native plants support our local and migratory wildlife

Vocabulary:

- **Native plants:** A native plant is one that occurs naturally in a particular region, ecosystem, or habitat without direct or indirect human intervention. We consider the flora present at the time Europeans arrived in North America as the species native to the eastern United States. Native plants include all kinds of plants from mosses and ferns to wildflowers, shrubs, and trees.
- **Invasive plants:** An invasive plant has the ability to thrive and spread aggressively outside its natural range. A naturally aggressive plant may be especially invasive when it is introduced to a new habitat. An invasive species that colonizes a new area may gain an ecological edge since the insects, diseases, and foraging animals that naturally keep its growth in check in its native range are not present in its new habitat.
- (<http://www.usna.usda.gov/Gardens/faqs/nativefaq2.html>)

Activity:

- With your parents or some friends, walk through your neighborhood and see if you can identify three native plants and one invasive one.
- Discuss the importance of native plants and how they benefit the birds, butterflies, and other animals in the Keys.
- Visit a botanical garden or nature preserve near your home.
- Use the Internet to make a list of birds that migrate through the Keys. Beside each bird write which plants they eat.
- Research the geology of the Keys.
- Inspect your yard and interview your parents for well your yard follows the Keys Friendly Landscape Principles (use the PIL website)
- List things you already do to help plants and wildlife at school and at home and share them with your classmates. Brainstorm new things you could do and pick one new thing that you will commit to do this month.
- In your journal write down your pledge and keep track of how well you are doing in keeping it.
- Draw a small poster of something you have learned about Land Conservation and share with your class.
- Revisit past pledges and review your progress in your journal.

Pledge: For Land Conservation Month I pledge to: _____

Suggested websites:

PIL WEBSITE

www.keysplants.com

<http://www.squidoo.com/Florida-Keys-Native-Plants>

Florida Keys Cooperative Invasive Species Management Areas: www.floridainvasives.org/Keys/Resources.html

Gardening Guide to the Florida Keys: http://monroe.ifas.ufl.edu/lawn/lawn_keysguide.shtml

September: Land

- SC.4.L.16.4 Compare and contrast the major stages in the life cycles of Florida plants and animals, such as those that undergo incomplete and complete metamorphosis, and flowering and nonflowering seed-bearing plants.
- SC.2.L.17.2 Recognize and explain that living things are found all over Earth, but each is only able to live in habitats that meet its basic needs.
- SC.5.L.17.1 Compare and contrast adaptations displayed by animals and plants that enable them to survive in different environments such as life cycles variations, animal behaviors and physical characteristics.
- SC.1.L.14.1 Make observations of living things and their environment using the five senses.



- SC.1.L.14.2 Identify the major parts of plants, including stem, roots, leaves, and flowers.
- SC.1.L.16.1 Make observations that plants and animals closely resemble their parents, but variations exist among individuals within a population.
- SC.1.L.17.1 Through observation, recognize that all plants and animals, including humans, need the basic necessities of air, water, food, and space.
- SC.K.L.14.3 Observe plants and animals, describe how they are alike and how they are different in the way they look and in the things they do.
- SC.3.L.17.2 Recognize that plants use energy from the Sun, air, and water to make their own food.





OCTOBER ENERGY

Objective:

- To identify the two different types of energy
- Identify the most common sources of each type of energy
- Determine ways to conserve energy

Vocabulary:

- Renewable Energy: Energy sources that can be replenished naturally.
- Nonrenewable Energy: Energy sources that can not be replenished in a short period of time.
- Energy Conservation: Reducing unnecessary energy use and waste.
- Solar Energy: Using the energy of sunlight to provide electricity.
- (<http://www.eia.gov/kids/>)

Activity:

- Brainstorm with your parents and friends and see how many types of renewable energy you can identify.
- Identify objects you see and describe how they get their energy: Examples are trees, a fire, a sailboat, and a lamp. See how many more you can think of.
- Using some of the websites below, make a list of daily behaviors you can change to help conserve energy.
- Inspect your house. Use the top tips on the Preserve Island Life website to find out what you can do at your house to save energy. Calculate how much money you could save.
- List things you already do to conserve energy at school and at home and share them with your classmates. Brainstorm new things you could do and pick one new thing that you will commit to do this month.
- In your journal write down your pledge and keep track of how well you are doing in keeping it.
- Draw a small poster of something you learned and share with your class
- Revisit past pledges and review your progress in your journal.

Pledge: This month I pledge to do one thing everyday that saves energy such as walking to school or turning out all of the lights when I leave a room.

Suggested websites:

PIL WEBSITE

The activities and lessons in the workbook below help develop skills in science, math, technology, language arts, critical thinking and social studies.

<http://energyhog.org/adult/wp-content/uploads/2012/02/Teacher-Energy-Hog-Buster-Workbook.pdf>

<http://energyhog.org/adult/wp-content/uploads/2012/02/Student-Energy-Hog-Buster-Workbook.pdf>

<http://www.eia.gov/kids/>

www.walkbiketoschool.org

http://www.saferoutesinfo.org/sites/default/files/tips_for_parents.pdf

Why Should I Recycle by Jen Green

October 3rd is National Walk to School Day!

October: Energy

- SC.2.P.10.1 Discuss that people use electricity or other forms of energy to cook their food, cool or warm their homes, and power their cars.
- SC.1.E.5.4 Identify the beneficial and harmful properties of the Sun.
- SC.3.L.17.2 Recognize that plants use energy from the Sun, air, and water to make their own food.
- SC.3.P.10.1 Identify some basic forms of energy such as light, heat, sound, electrical, and mechanical.
- SC.3.P.10.2 Recognize that energy has the ability to cause motion or create change.
- SC.4.P.10.1 Observe and describe some basic forms of energy, including light, heat, sound, electrical, and the energy of motion.



- SC.4.P.10.2 Investigate and describe that energy has the ability to cause motion or create change.
- SC.4.P.10.4 Describe how moving water and air are sources of energy and can be used to move things.
- SC.5.P.10.1 Investigate and describe some basic forms of energy, including light, heat, sound, electrical, chemical, and mechanical.
- SC.5.P.10.2 Investigate and explain that energy has the ability to cause motion or create change.
- SC.5.P.10.4 Investigate and explain that electrical energy can be transformed into heat, light, and sound energy, as well as the energy of motion.
- SC.5.P.11.1 Investigate and illustrate the fact that the flow of electricity requires a closed circuit (a complete loop).





NOVEMBER

4 R'S

Objective:

Identify everyday ways to implement the 4 R's.

Vocabulary:

- Reduce: Use less and produce less waste.
- Reuse: Extending the life of an item by using it again as it is or creating a new use for it.
- Recycle: The process of producing new products from used material or the process of remanufacturing used materials into new products.
- Rot (Composting): to decompose.
- (http://www.stopwaste.org/docs/kids_doing_the_4rs_lesson.pdf)

Activities:

- Research the 4 R's and in your journal rank them in importance and tell why
- List 4R things you already do at school and at home and share them with your classmates. Brainstorm new things you could do and pick one new thing that you will commit to do this month.
- In your journal write down your pledge and keep track of how well you are doing in keeping it.
- Think of one way everyday that you can reduce the amount of waste you create. For example use cloth napkins instead of paper napkins.
- Make a poster of the 4 R's and draw one activity under each.
- Take a grocery shopping trip with your parents. Calculate how much plastic and oil could be saved each year if you switched to reusable bags. <http://www.pbs.org/teachers/mathline/concepts/earthday/activity2.shtm>
- Reuse old clothes by donating them to local charities.
- Use your recycling bin by placing items such as plastics labeled 1-6, or old newspapers in it (if you do not have a recycling bin contact Waste Management at 305-296-8297).
- Identify the different items in your home that can be composted.
- Research what your community is doing in regard to the 4 R's. Write one of your city commissioners with your ideas on how the city could improve its efforts.
- Revisit past pledges and review your progress in your journal.

Pledge: This month I pledge to do something for each of the 4 R's: _____

Suggested websites:

PIL Website

Why Should I Recycle by Jen Green

www.scrapdr.com/docs/Childrens_Books_about_Recycling_&_more.pdf

To make your own compost column:

www.pbskids.org/zoom/activities/sci/compost.html

November: 4 R's

- | | |
|-------------|---|
| SC.4.E.6.3 | Recognize that humans need resources found on Earth and that these are either renewable or nonrenewable. |
| SC.4.L.17.4 | Recognize ways plants and animals, including humans, can impact the environment. |
| SC.4.E.6.6 | Identify resources available in Florida (water, phosphate, oil, limestone, silicon, wind, and solar energy). |
| SC.1.E.6.2 | Describe the need for water and how to be safe around water. |
| SC.4.P.8.2 | Identify properties and common uses of water in each of its states. |
| SC.5.E.7.1 | Create a model to explain the parts of the water cycle. Water can be a gas, a liquid, or a solid and can go back and forth from one state to another. |

Don't forget November 15th is America Recycles Day!





DECEMBER

Choosing Green Products Green Gifting, Consumerism, Greenwashing

Objective:

- Identify and understand what constitutes a “green” product.
- Develop an understanding of how what we purchase can affect the environment

Vocabulary:

- Green/Eco Friendly products: Products that have less of an impact on the environment or are less harmful to human health than traditional products.
- Greenwashing: Misinformation released by a company or organization to present an environmentally responsible public image.
- Consumerism: the theory that an increasing consumption (purchase or use) of goods is economically desirable also: a preoccupation with and an inclination toward the buying of consumer goods.
- Intangible Gifts: Intangible gifts are gifts that you actually can't touch or open or keep on hand.
- Carbon offsets: A carbon offset is a credit for carbon emissions reductions that someone else has achieved that an individual or organization can purchase to negate their own carbon footprint.

Activities:

- Work with a parent or adult and find household items that can be replaced with green products.
- Divide a sheet of paper in half, on one side write Need and on the other write Want. List at least 5 items in each column. Think about how each item is packaged, delivered and its useful life. How many of these items can you do without?
- Do an Internet search to find ecofriendly gifts and gifts you can make.
- Make a list of your family and friends and some things you can make or intangible gifts you can give as a present for each.
- Research green businesses you could purchase gifts from this holiday season
- Look back over your past pledge successes this year and calculate the carbon offset you can give as a gift
- Instead of purchasing holiday cards/gifts, make them.

Pledge: I pledge to make a card/gift for three people on my gift list this holiday season.

Suggested websites:

PIL WEBSITE

<http://www.yale.edu/ynhti/curriculum/units/2010/1/10.01.03.x.html> (5 week unit for 4th grade regarding consumerism and the environment.)

www.nationalgreenpages.org

Suggested books:

The Lorax by Dr. Seuss

The Giving Tree by Shel Silverstein

Ecoart!: Earth-Friendly Art and Craft Experiences for 3-To 9-Year-Olds by:

Laurie Carlson

December: Buying Power

- SC.4.E.6.3 Recognize that humans need resources found on Earth and that these are either renewable or nonrenewable.
- SC.4.L.17.4 Recognize ways plants and animals, including humans, can impact the environment.
- SC.4.E.6.6 Identify resources available in Florida (water, phosphate, oil, limestone, silicon, wind, and solar energy).

