



Forever Green Patch Program

An At-Home Patch Program

Girl Scouts of California's Central Coast Forever Green Patch Program



- In this Forever Green Patch Program, girls will learn how to use resources wisely and will help make the world a better place!
- To complete this patch, girls may complete as many of the activities as they wish though only one from each of the steps is required.

Program Outline

Section 1 – Energy Conservation

➤ Calculate energy consumption in the home

- Take a look at your families' last electric bill – call the local electric company or log-on to electric company's website.

OR

- Use the chart (on the last page) to estimate electric usage – look up the appliances used in the home and add up the annual cost

➤ Explore ways to save energy

- Brainstorm energy saving ideas
- Visit one of the following sites for more ideas:
 - <http://www.kidsenergyzone.com/>
 - <http://www.alliantenergykids.com/>
- Decide on one or more ways to save energy and make a pledge and a plan for fulfilling the pledge.

➤ Power Down

- Do an activity at home that uses no external power or fuel for at least an hour.

➤ Take Action. Implement an energy saving project for your family.

- Identify low or no cost energy saving measures that could be implemented in your own home. Advocate to your parents/guardian to have the changes made and help in making those changes.

Section 2 – Water Conservation

➤ Watch the Water Cycle by Bill Nye

- https://www.youtube.com/watch?v=Wi_79tGOhe8

➤ Create a Watershed Model.

- Generally, watersheds are described as the land that drains water from an area into its waterways such as streams and rivers. Watersheds can be large or small, draining a single valley or the entire basin. In this activity, girls explore what a watershed is and how it works.
- **Materials:** For this activity, girls will need various sizes of rocks, a shallow plastic wash basin or tub (about 12 x 18 inches and 10 inches deep), heavy paper or a plastic tarp, a permanent marker, and a sprinkling can or spray bottle (to simulate rain).
- **Procedure:** Place some rocks in the wash basin to build mountains and valleys. Cover with heavy paper or a plastic tarp. Guess the route "rainwater" (from the sprinkling can or spray bottle) will take and where it will pool and be stored. Mark the predicted route with a permanent marker. Then test the predictions by adding rainwater and watching where it runs!

➤ Water, Water Everywhere

- There is a finite amount of water on Earth. This activity demonstrates how much water is available for different types of activities – and just how little water is available for drinking.
- Materials:
 - 1 gallon water jug
 - Cup of ice cubes (optional)
 - Clear cups
 - Spoons
- Procedure:
 1. Prepare a gallon of water, a cup of dirt and an empty cup marked at 1/2 cup.
 2. Explain that the gallon of water represents all of the water on earth.
 3. If using ice cubes, place one small cube in the cup then have the girls fill the cup with water up to the 1/2 cup mark. Explain that the 1/2 cup represents all of the fresh water on earth.
 4. Have each girl scoop the ice cubes (or a spoonful of water) from the cup and put it back into the gallon of water. Explain that the spoonful of water represents the frozen polar ice caps and glaciers in the world – water that's not really available for drinking or growing food.
 5. Pour all but a drop of water into the dirt. Explain that this represents water that's in the ground (ground water). This water can be extracted from the ground for farming and drinking after it is purified.
 6. Explain that the drop of water left in the cup is all of the water available for drinking and bathing and watering the lawn and doing the dishes and laundry and brushing teeth, etc. – it is the water that comes out of the faucet at home.

➤ Take Action – Learn how to advocate for the local watershed

- Research what needs to be done to support the local watershed. Consider producing a PSA about storm drain run-off or the importance of preserving local wetlands. What other ways can girls take action?

Section 3 – Reduced Waste

➤ **Make a pledge to reduce food waste.**

- On average, Americans waste about 20% of the food they purchase. That adds up to about 48 million tons of food each year. Brainstorm ways to reduce food waste and make a pledge to try one or more of the ideas.

➤ **Make a reusable lunch bag from an old t-shirt.**

- Cut the sleeves and collar out of a small t-shirt. Sew a double seam across the bottom to form a bag. For a “no-sew” version, use a strong rubber band or sturdy hair-tie to gather and seal the bottom of the shirt. Use the bag to take a “no-waste lunch” lunch to school. A “no waste” lunch is one where nothing ends up in the trash. Fill the bag with a lunch stored in reusable containers, include a reusable ice pack, a reusable water bottle, cloth napkin and utensils – bring them home and wash and reuse them.

➤ **Learn about food banks and learn how the organization is helping the community reduce food waste.**

- Many food banks accept donations of day-old bakery products, non-perishable products, and fresh fruit and vegetables that are not spoiled, but don’t meet the store’s quality standards. Some even accept garden produce or sponsor “gleaning” programs – where volunteers collect fruits and vegetables missed during the harvesting process. Find out how girls can help to encourage donations to the food bank.
- Learn about food banks here:
 - Video: <https://www.slofoodbank.org/our-mission/>
 - More information: <https://www.slofoodbank.org/food-distribution/>

➤ **Learn about gleaning.**

- “Gleaning” is the process of going back through a commercial field to pick the fruit and vegetables missed by the mechanized equipment.
- Learn more here: <https://www.slofoodbank.org/food-rescue/>

➤ **Take Action - Build a Lasagna Garden**

- Lasagna gardening is a no-dig, no-till organic gardening method that results in rich, fluffy soil with very little work from the gardener. The name “lasagna gardening” has nothing to do with what you’ll be growing in this garden. It refers to the method of building the garden, which is, essentially, adding layers of organic materials that will “cook down” over time, resulting in rich, fluffy soil that will help your plants thrive. Also known as “sheet composting,” lasagna gardening is great for the environment, because you’re using your yard and kitchen waste and essentially composting it in place to make a new garden.
- For more information on recycling organic materials:
<https://www.calrecycle.ca.gov/nav/organics>
- **Materials Needed**
 - Repurposed fish bowl, aquarium, large jar or other clear container (note: for individual model gardens, use empty peanut butter or mayonnaise jars)
 - Sand, gravel and topsoil

- Kitchen green waste - trimmings from fruits and vegetables, apple cores, used tea bags, coffee grounds, etc. (ask each girl to bring a container of kitchen green waste from home)
- Yard waste - grass clippings, fallen leaves, etc. (ask each girl to bring some yard waste from home)
- Newspaper
- Sod (optional)
- Worms (optional)
- Seedling plants (later)

○ **Procedure**

1. Put a layer of gravel, sand, and topsoil to in the bottom of your clear container.
2. If someone you know is installing sod, ask for a piece to layer on top of the base (or ask the local nursery if there is a scrap they are willing to donate).
3. Place three layers of newspaper over the base layer (right on top of the sod if you are using it).
4. Alternate layers of yard and kitchen waste until the container is about $\frac{3}{4}$ full.
5. Add a layer of top soil.
6. Finish with a mulch of grass clippings or crushed, dry leaves.
7. Thoroughly wet the garden and continue to water it when it gets dry (not too wet – just damp is o.k.).
8. If you are using worms, toss two or three on top of the garden. They will burrow down through the soil. (You can purchase worms at the garden store or sometimes find them on the sidewalk after watering the lawn.)
9. In a few weeks, you will notice that the organic matter will be decomposing. The worms speed the process. If you included a layer of sod, it will decompose as well. A lasagna garden is a good way to convert a section of lawn into a flower or vegetable garden.
10. Once the organic material has at least partially decomposed, you can add plants. (Note: if you make a larger container as a group

Electrical Usage Calculator

Appliance	Approx. Appliance Wattage	Average Monthly Use - Hours	Average Monthly Kilowatt Use	Multiply by Local Rate	Annual Energy Cost
Air Conditioner - Central (2.5 TONS)	3500	300	1050		
Air Conditioner - room (9,000 BTU)	1050	350	367.5		
Blender	390	20	7.8		
Christmas Lights	250	60	15		
Clothes Dryer	5000	30	150		
Clothes Washer	500	30	15		
Coffee Maker	900	10	9		
Computer - CPU and Monitor	6.5	720	4.68		
Computer - Wireless Router	7	720	5.04		
Crock Pot	200	64	12.8		
Dishwasher	1800	30	54		
Fan (Portable)	115	200	23		
Food Freezer	350	400	140		
Furnace Fan Motor - (Intermittent)	350	160	56		
Hair Dryer (Portable)	1800	6	10.8		
Lawn Mower	1500	16	24		
Light Bulb - Compact Fluorescent 13W (60W Equiv)	13	120	1.56		
Light Bulb - Fluorescent (2 Tubes 4ft.)	96	120	11.52		
Light Bulb - Incandescent	60	120	7.2		
Oven - Microwave	1500	5	7.5		
Oven - Toaster	1500	2	3		
Oven/Stove - Electric	5000	100	500		
Refrigerator	500	275	137.5		
Stereo/CD	360	30	10.8		
Swimming Pool Filter Motor - 1.5 HP	2100	600	1260		
Swimming Pool Heater	5000	600	3000		
Television - Cable/Sattelite or DVR Box	33	720	23.76		
Television - CRT 32"	200	120	24		
Television - LCD 32"	125	120	15		
Television - Plasma 42"	301	120	36.12		
Vacuum Cleaner- Portable	800	4	3.2		
Video game - Nintendo Wii	19	720	13.68		
Video game - PlayStation 3	197	720	141.84		
Video game - Xbox 360 Elite	203	720	146.16		
Water Heater - typical family of 4	4500	85	382.5		

Use this form upon completion:

<https://www.cognitofrms.com/GirlScoutsOfCaliforniasCentralCoast2/GSCCCForeverGreenPatchProgramAtHome2>

Patch purchasing link:

https://girlscoutscoc.doubleknot.com/orgstore/store/store_viewitem.asp?idProduct=44516&promo=