



## Project Noah - Month 10

Billie Nicholson



**Project Noah** is a yearlong food storage and emergency preparedness program designed to help you set and obtain goals in the area of family preparedness. The program is divided into twelve monthly assignments touching on lots of short and long term preparedness subjects including a preparing, a reporting and a sharing segment each month. These lessons are designed to be used in church or community groups focused on self reliance and preparedness. Start your own group and use these newsletters as a reference resource. Many articles will link to previous articles on [SunOven.com](http://SunOven.com) or other sources. Click for additional information.

Our TENTH month's lesson focuses on pre-disaster preparations for emergency cooking. What food can you grow at home and not need to buy? What do I need in a power outage? How will I cook my food? How will I store fuel safely? What will I use for light at night? Have you considered planting a garden to help your family have fresh nutritious food that you don't have to shop for? Melissa K. Norris has some ideas.

Our first aid topic asks the question: Does Chicken Soup really make you better or is it just a placebo?

The non-food items to acquire are Rubbing Alcohol, Hydrogen Peroxide and band-aids. How are they used? Do they have the same use? Do they have an expiration date?

We are continuing to collect recipes to prepare using food storage items. What are some of your favorites? You can send your recipes to [editor@sunoven.com](mailto:editor@sunoven.com)

Do you know the difference between freeze-dried and dehydrated foods? Do you have a way to make some? How do you use them in cooking?

Assignments on Page 10



Order Your Sun Oven® Today

### Ask Billie

**Q.** Is it possible to make dried fruit and vegetables in the Sun Oven®?

**A.** Yes, dehydrating with the Sun Oven® is easy with the multiple drying racks included. Line each rack with parchment paper, thinly slice fruit, vegetables or meat. Set up the oven out of the sun track so the temperature will not rise above 150°F. Leave the door unlatched with one latch under the glass to prop it open for air and moisture flow. We have dehydrating instructions details in a video available at: <https://www.sunoven.com/sun-cooking-usa/how-to-use/>



What is your Most Burning Question about Food Storage or Emergency Preparedness?



Send your questions to [editor@sunoven.com](mailto:editor@sunoven.com)

## Growing Your Own Food

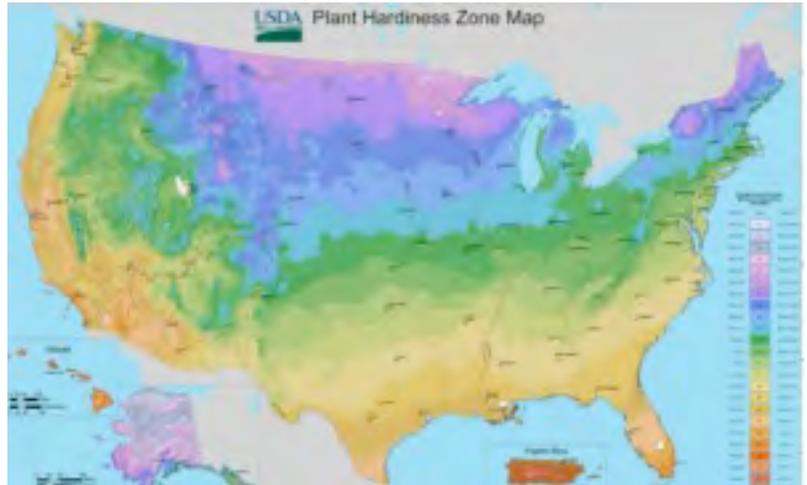
Jason Matyas & Rob Wokaty

*This article was written from notes taken at a webinar presented by Jason Matyas and Rob Wokaty*

This is the time to begin planning your spring garden. Beyond Off Grid presented a webinar filled with answers to many questions you might have about growing your own food. There are four major constraints: planning factors, how much can you grow, how much can you expect to produce, and how to handle preserving the harvest. These things need to be considered before the first shovel of soil has been turned over.

Here are some things to consider:

- Get a soil test to determine the pH (acidity) and the organic matter content.
- Which way does the space face? Southwest facing beds get the most sun, warm earlier in the season and stay warm longer during the day.
- How many hours of sunlight does the space get full sun? Pay attention to shade cast by fences, trees and buildings.
- What is around the growing space? Is there shade? Is there nutrient competition?
- Will you grow in the existing soil or will you create raised beds? What will you use for soil?
- What about availability of water? How will you get it to your plants? Do you need a way to collect and save it in case of drought? Could you drill a well?
- The space available will determine the style of gardening you do: rows, square foot, vertical towers.
- What is the growing season length? The difference between the date of the last spring frost and the first fall frost is your growing season. This varies with elevation and latitude, and will determine which plant varieties you should grow.
- Do you know how to extend the growing season in your area? Cold frames help.
- How much harvest can you expect? Some plants are one timers, and others are multi-bearing.
- Does what you plant have more than one edible part? Did you know that sweet potato leaves are edible? How about hosta shoots?
- What vegetables and fruit do you like to eat? Plant them.
- When selecting fruit trees be sure to determine how many [chill hours](#) are required to encourage fruit to set. Make sure you have that many chill hours in your area.
- Assuming the best results, what will you do with the abundance you have grown?
- What about pests both insect and animals? Can you protect what you plant?



A successful garden will require thinking through these questions. Don't panic, it's good for you brain.

## 7 Foods to Never Purchase from the Store



[Melissa K. Norris](#)

I don't know about you, but every time I pay for groceries I swear they've raised the prices again. I end up spending more and more for less and less in my cart.

We do our best to purchase organic, grass-fed, pasture raised, non-GMO foods. But let's be honest, sometimes that can be pretty expensive. I believe it's worth the expense when we can afford it, but sometimes I have to go with items that don't put my bank account into the red. I always purchase organic milk and butter, but I can't always afford the raw version. Anyone else with me?

Our goal with growing our own food is to grow enough so we don't have to purchase the item from the store ever. Obviously, we aren't able to do this with everything.

Some items we eat from home while they're in season, other's we grow and also preserve enough to get us through part of the year, and some items we grow enough of to last us through until the next year or growing season. These are items we raise or grow that I never purchase from the store.

1. **Eggs.** Our laying hens provide enough eggs to keep us in stock all year round. A few months in the late fall and early winter we run a little lean, but the girls pick back up after molting. For our family 4 laying hens is enough to keep us in eggs. Want to raise your own backyard chickens? Then you absolutely need to check out our [5 Tips to Raising Livestock for Food](#)
2. **Tarheel Green Pole Beans.** If you've been reading any of my articles, you know I love my families strain of heirloom Tarheel green beans. I've never eaten store bought green beans or purchased them, as a child growing up or as an adult with my own home. With just two 12 foot rows, we grow enough green beans to eat them fresh and to can about 60 pints of green beans. I've 60 pints is just the right amount to keep us through the year. Far as I can track, my family has been saving this same strain of beans for over 100 years. **Pole beans will give you more beans for the space than bush beans.** If you're looking to grow enough for a full year, a pole bean will win hands down for volume every time.
3. **Blueberries.** We have five blueberry bushes and I never purchase them from the store. We gobble them up in the summer months (yes, blue fingers and lips are a total homesteader's fashion statement in August), make up our favorite [Low Sugar No Pectin Blueberry Jam](#), and freeze the rest for smoothies, more jam (I may be slightly addicted), pies, muffins, pancakes, or just plain old munching.
4. **Raspberries.** Seriously, raspberries are easy peasy to grow. We transplanted a row from an old overgrown patch across the fence and they've done beautifully.
5. **Tomatoes.** This was the first year we grew enough tomatoes to make all of our own salsa and tomato sauce. It's not quite summer harvest, but judging by the jars I have left in the pantry, I believe we'll just make it without purchasing any from the store.

[CONTINUE READING](#)

## Emergency Cooking Alternatives

An internet search for alternative cooking methods returns several articles that list 8 - 10 options. The biggest factor to consider when using off grid cooking techniques is fuel. What works and where do you get it? Can you store it for a long time and how much will you need to acquire? Having a couple of alternatives will take away the panic of an electrical outage.

**Wood** - is the first alternative most people think of. It can be used indoors in a wood-burning stove or open fireplace. Many of us may have grandparents whose sole cooking source was a wood cook stove. It can also be used outdoors in campfires as wood or charcoal. Wood can be foraged from forested areas or purchased. It will keep a very long time if covered and kept dry. Hardwood is the best because it burns longer. You will need a large storage space to keep it. Use heavy-duty pots that can absorb and distribute heat evenly and long handled utensils. Keep CO monitor and fire extinguisher handy.

**Coal** - There is roughly 250 billion tons of it in the United States. Anthracite coal has the highest carbon content and gives the most heat. More than 90% of that is found in the state of Pennsylvania. Coal stoves require less maintenance than wood burning stoves and can be more efficient. Proper ventilation is required. Anthracite coal will keep indefinitely if stored dry. You will need to store a large amount and have a large storage place for it, too. In the early 20th century, coal furnaces were built into the basements of homes along with a "coal chute" thru which the coal was delivered.

**Natural Gas** - stoves and fireplaces combine the looks of a wood fire with the convenience of gas if you have access to it in your community. Natural gas is not often interrupted during situations when the electricity might be. Just keep paying your gas bill and it will keep flowing to your home.

**Propane** - can be used in converted gas ranges for stove top cooking and baking. It can also be used outside in portable camp stoves, grills and generators to enable the use of other home appliances. It has an indefinite shelf life but there are legal limits on the amount you can store. The cylinders must always be stored outside the home. [Sterno - Read More](#)

**Charcoal** - Should never be used indoors. The carbon monoxide by-product of burning is deadly. Outdoors, charcoal can be used in grills, with Dutch Ovens, volcano/pyramid stoves or in an applebox reflector oven. Charcoal starts out with some kind of wood, heated in an oxygen-poor environment. Without oxygen, the wood can't actually catch on fire. Everything in the wood besides the carbon melts away into liquid or gas. Hardwood lump charcoal is the fuel used for most cooking in developing countries. Charcoal briquettes are a combination of charcoal and other ingredients that make them burn better. Hardwood makes less ash and burns hotter but faster. Some unburned wood in this provides the smoke flavor. A large quantity is required for outdoor only cooking.

**Kerosene** - Cookers and heaters can be used for one pot cooking. Proper ventilation is required. It can be stored up to three years if it's high quality 1K and is stored out of sunlight. Check your local government for the legal limit on amounts you can store. Store it in garage or shed.

**Gasoline** - Should never be used for cooking. Use it to run an outside generator that can operate other home appliances, like the microwave! It can be stored for several years in OSHA approved containers with double Stabil. Never store this in your home.

**Sun** - Of course, our number one off grid cooking alternative is a Sun Oven®. Harnessing the energy of the sun is an inexpensive fuel source (it's FREE!) and you don't need to have a storage place either. If there is enough sun to cast a shadow, you can cook in a solar oven. It only takes about 15 seconds to set up and can preheat in the time it takes you to get the ingredients together to cook. Keep it focused on the sun, checking every 30 minutes, and it will cook a meal in nearly the same amount of time as a conventional oven. Set it up and point it to the south sky and leave it all day for a slow cooked meal. There is no air movement inside the Sun Oven, so food doesn't dry out - it just tastes GREAT!

### References



[Commons.WikiMedia](#)

## What to Do When the Lights Go Out

Billie Nicholson

In the case of a weather emergency, or other reasons that the electrical grid stops functioning, how will we light our homes at night? We need to have some non-electrical alternatives to be able to get around in the dark.

Finding alternatives for lighting is pretty easy. For the short term, many items are inexpensive, too. When the grid is down, we revert to using items used in times past.

**Candles** - are one of the oldest light sources. They consist of two parts - a fuel source and a wick. The fuel source has changed over the years but is a form of solid fat that burns at a steady rate. Originally made from paper, wicks have advanced over the years as well, to braided cotton infused with chemicals that control the speed of burning and coil when they burn to trim themselves.[1] Square ones help keep the wick from clogging. Select candles that do not smoke or give off foul odors (tallow). Candles made from beeswax are recommended. Add some survival candles with long burning times to your emergency supplies. Save the melted wax that doesn't burn to reuse in candles you make yourself. Make your own wicks out of cotton string soaked in melted wax and cooled.[2]

**Oil Lamps** - were developed about the same time as candles, but candles stayed in favor longer. Oil lamps used a variety of oils. Today's oil lamps consist of a reservoir for the oil, a clamp which holds the wick up and away from the oil (so the entire surface doesn't catch on fire) and a glass chimney that directs the air draft over the flame. This design makes the light brighter and the lamp safer to carry. Kerosene has been used for a long time. If you use it in a lamp, do so in an area with plenty of ventilation due to the odor it emits. Commercially available lamp oil is a liquid petroleum product designed to burn cleanly in brass and glass oil lamps, torches and lanterns. It is further refined than kerosene so that it does not produce as much harmful smoke, soot and other pollutants. When you are setting up a lamp, follow the instruction for filling the reservoir (leave at least a 1/2 inch from top). The wick should be clipped and cleaned before each lighting. Do not extend the wick above the combustion chamber because that will result in incomplete combustion, making smoke and soot as well as excess heat. If you see this, lower the wick until it stops. To turn off the lamp, turn the wick down into the burner until the flame goes out. Do not turn it so far that it becomes unthreaded from the burner assembly. Keep lamp oil at room temperature. Do not store lamp oil in a garage or shed where it could freeze. It could be an explosion hazard if it defrosts too quickly.[3]

**Battery Powered Lights** - are usually the first thing we reach for when the power goes off unexpectedly. Battery powered lanterns are safer to use than candles or oil lamps. You can either have ones that work on replaceable batteries or others that come with rechargeable batteries. We have some that stay plugged into electrical outlets all the time. When the power goes off, they automatically light up so we can find them. Solar powered or hand-crank lights are also available.

**Solar Lights** - work great as night lights, indoors or out. You just need to remember to put them outside each morning to get recharged. You can screw them off the ground stake and place them in a paper cup. They can be used outdoors to light paths, patios and as security lights with motion sensors. Solar panels, LED lights and batteries expand their lighting capabilities. Solar lights can improve the lives of the world's poorest people as the quality of products and affordability improves. They work anywhere the sun shines, even in places where there is no or an unreliable electrical grid. Solar lights will save the expense and health hazards of buying kerosene in developing countries.[4]

### References

## **Is Chicken Noodle Soup Good for a Cold?**

Have you ever wondered why eating chicken soup when you had a cold or chest congestion made you feel better? Recent studies have shown that the ‘feeling better’ response to chicken soup is more than a placebo. Dr. Steven Rennard from the University of Nebraska Medical Center has published a study in the journal **Chest** in which they conducted a series of tests to examine the health benefits of chicken soup. “Everyone’s heard this from their mother and grandmother in many cultures,” Rennard said. “We found chicken soup might have some anti-inflammatory value.”

After examining blood samples from study volunteers, the researchers found that homemade chicken soup reduced the movement of a type of white blood cells, called neutrophils, which help defend against infection. By inhibiting movement of these cells in the body, chicken soup can help reduce upper respiratory cold symptoms, Rennard theorized. The reduction in movement of neutrophils may reduce activity in the upper respiratory tract that can cause mucous production symptoms associated with a cold,” the University of Nebraska said in a press release. [1]

Based on their research results they have theorized that benefits from a combination of chicken and vegetables have an anti-inflammatory effect. Some of the benefits of chicken soup include:

1. They help the cilia of the nose and bronchial passages move quickly so they can defend the respiratory system against contagions.
2. Sometimes just increasing the intake of warm tea or broth, to assure proper hydration of the body, can make a major difference in healing. (You don't need medical technology to check if you are hydrated - just keep drinking until your urine turns light yellow to clear.)[2]
3. The salt in broths can help soothe sore throats. If you need to reduce salt, use dried herbs like oregano, parsley and chili pepper flakes to enhance flavor.
4. The soup’s warm liquid works to open stuffy sinuses.
5. They’re packed with immune supporting minerals like calcium, magnesium, phosphorous, silicon and sulphur. Chicken soup delivers these in a form that is easy to absorb.
6. The onions, garlic and additional vegetables provide a healthy dose of phytonutrients, important for a properly functioning immune system, as well as serving as anti-inflamatants.
7. When your body is busy fighting off infection lots of energy is required. Chicken soup is a great source for easily digested calories.
8. Digestive system health is especially important when our bodies are sick so they can absorb infection fighting vitamins and minerals. Glucosamine, a main building block of our digestive system is released from bones when they’re cooked. The gelatin that congeals on the surface includes glucosamine and is used to repair connective tissue and reduce inflammation.[3]
9. Chicken noodle soup boosts vitamin A and selenium consumption. Both support thyroid function. [4]

Chicken soup has been a mainstay for generations for parents who seek to comfort their families. There is value there. Eat up!

**References**

## Sun Roasted Chicken and Veggies



Swiss Chard torn into pieces



Carrots and Beets added



Breaded Chicken, Onion and Sage

### Ingredients

- |                             |                        |
|-----------------------------|------------------------|
| 4 cups torn Swiss Chard     | 1/2 cup white wine     |
| 4 carrots sliced lengthwise | Prepare separately     |
| 2 beets whole               | 1 tsp bouillon         |
| 2 chicken thighs            | 2/3 cup Quinoa         |
| bread crumbs to coat        | 1.5 cup water          |
| 1/2 purple onion            | Salt & pepper to taste |
| 2 TBS fresh sage            |                        |

### Directions

Preheat Sun Oven®

Spritz inside granite ware pan before adding vegetables. Arrange veggies leaving space in center for breaded chicken thighs. Add wine.

Add grain of your choice in 2nd granite pan. We chose 2/3 cup Quinoa plus 1.5 cups water with 1 tsp chicken bouillon.

Bake 2 hours, adjusting focus every 30 minutes.



Into Sun Oven covered and sealed



Quinoa ready



Chicken and Veggies ready

## Rubbing Alcohol, Hydrogen Peroxide & Band Aids



These are all items that every household should have on hand. They have many uses in addition to first aid.

**Rubbing alcohol** (isopropyl alcohol or isopropanol) has been around since the 1920's. Exxon Oil Company created it when they were looking for something they could use from gas by-products. Isopropanol became the first commercial synthetic alcohol. [1]

It has been used for many years as a surface disinfectant as well as treating small skin wounds. It works on a cellular level and kills microbes by damaging the fatty molecules in their cell membranes,

making them leaky. In addition, alcohol also disrupts the cell activity of proteins. Microbes fall apart. The concentration should be 70% or more. When using alcohol to clean surfaces, allow the surface to air dry, don't use a towel. Rubbing alcohol has a two year shelf life once opened when stored in a secure, dry container in a cool, well-ventilated area. It is highly flammable and must be kept away from heat and flames.[3] Plastic storage bottles will degrade faster than glass and will eventually leak. Linda Loosli at [Food Storage Moms](#) lists additional uses for alcohol beyond disinfection. One of my favorites was using a mixture of 1 part rubbing alcohol and 5 parts water to wipe the outside of car windows to minimize the need for scraping ice. Did you know that a rubbing alcohol rinse will remove garlic/onion odors from your hands? [4] Don't drink rubbing alcohol, it can be deadly.

**Hydrogen Peroxide** is a germicidal agent composed of water and oxygen. It kills disease organisms by oxidation. It is the world's safest all natural sanitizer. When it reacts with organic material (living matter) it acts as a controlled burn and breaks down into non-toxic oxygen and water. Standard hydrogen peroxide is a 3.5% solution can be purchased at your local pharmacy. Shelf life is up to three years unopened and about 6 months of useful activity once opened.[5] This is not recommended for internal use because of the stabilizers included. 6% hydrogen peroxide is used in beauty salons for hair coloring. A 35% food grade product is used in the production of cheese, eggs and whey containing products. This is the only grade recommended for internal use. If you purchase this grade be sure to follow instructions to dilute it before using internally. Don't use chlorinated water to dilute peroxide. Then store the concentrated remains tightly sealed in your freezer.[7] Hydrogen peroxide has many uses in the home in addition to disinfecting surfaces including vegetable and sprouting seed soaks to kill bacteria and neutralize chemicals like insecticides. It can be mixed with baking soda to make a toothpaste, used diluted as a mouthwash, and as a teeth whitener.

**Band-Aid** is a brand name for pharmaceutical and medical devices company, Johnson & Johnson's line of adhesive bandages. These adhesive bandages were invented for the wife of a J&J employee, who frequently cut or burned herself while cooking. They allowed her to dress her wounds without assistance.[7] These sterilized pads attached to tape are now available around the world in many sizes, shapes and decorations. Marketed by many pharmaceutical companies, adhesive bandages consists of an adhesive sheet made of coated paper, plastic or latex and an absorbent pad made of cotton with a thin, porous-polymer coating over it to minimize sticking to the wound. It may be medicated with an antiseptic solution.[8]

### References

## Dehydrating or Freeze Drying for Food Storage

**Dehydrating** fruit, vegetables and meat has been a process of food preservation for thousands of years using two sources of free and readily available forms of energy: sun and wind. Over time the use of heat in the form of small, closely controlled fires in “still houses” were created to dry items in areas that did not have enough strong sunlight for drying. Sometimes these fires added the element of smoking as well. Today, dehydrating can be done with the same free energy sources or by using a drying machine which slowly heats and dries thin slices. Dehydrating removes about 90-95% of the moisture content. Once dried, food should be stored in air tight containers.

**Freeze drying** began centuries ago as well with the Incas taking food to high mountain locations where the food froze overnight and then were dried slowly during the day. Today, the process occurs in an electrical machine that freezes the food and then, in a vacuum chamber, slowly increases the temperature to dehydrate it. The food is then nitrogen sealed to protect it from moisture and oxygen. Sealed like this, freeze dried foods can last for many years. The preservation process removes moisture without damaging the nutritional value. There are home freeze dryers on the market today that range in cost from \$3,000-8,000.00. This equipment does require more energy than canning and freezing, but freeze dried products do not require additional energy to store. Protein sources like meat, fish and poultry preserved in a freeze dried form have increased shelf life and nutritional value. Be sure to freeze dry them as soon as they have been cooked and cooled. If you keep them in the fridge for a few days, they'll taste like leftovers when reconstituted. Freeze drying removes 98-99% of moisture. Using dehydrated or freeze dried foods simply requires adding water. Easy peasy ...

The advantages of having these items in your food storage include:

- long term storage of difficult to store food sources, with nutritional value intact (some are advertized to last 25-30 years)
- light weight if you need to move them
- freeze dried foods rehydrate quickly and regains its original fresh flavor, aroma and texture

The disadvantages include:

- Cost of food may not be cost effective for certain foods
- Equipment is expensive
- Not all foods can be freeze dried
- Moisture control in storage is necessary

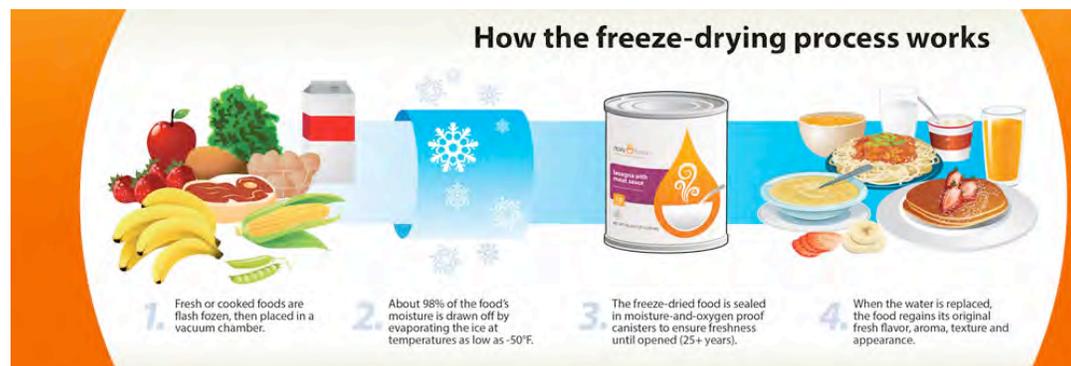


Image by  
[Daily Bread](#)

## Project Noah - Tenth Month Assignments



[Project Noah](#)

1. Pre-Disaster Preparation:
  - a. Have you considered planting a garden?
  - b. Design a 4x8' bed
  - c. Set up an alternative way to cook
  - d. Set up a place to store alternative fuel safely
  - e. Obtain an alternative lighting source
2. Non-Food: rubbing alcohol, hydrogen peroxide & Band-Aids
  - a. Determine how much your family will need for 90 days and for a year - is this doable?
  - b. Shop for the best prices and buy what you can afford
  - c. Decide where you can store them safely
  - d. Check your supply of adhesive bandages and antibiotic cream
3. Long Term: Dried/freeze dried food
  - a. Make or purchase some dried/freeze dried food for food storage
  - b. Try at least one recipe containing dehydrated meat or vegetables
  - c. Try making some dehydrated food
4. Continue collecting "make your own" recipes - look for pasta sauces
  - a. Collect ingredients to make pasta sauce
  - b. Make a recipe for homemade pizza sauce

Next Month's topics will be: car emergency kit, emergency communication and financial preparedness

How old is too old? Food storage rotation

Short Term Storage: batteries and matches

How secure are you? Take our quiz and rate yourself

We will have salad dressing recipes to share