



Project Noah - Month 12

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 or other sources. All issues are available for download [here](#).

Our twelfth month's lesson focuses on the self-reliance lesson of personal finances with tips on using a budget to control debt.

Essential oils will be expanded for the next few months as we explore their uses in natural healing and more.

EMPs can be a way to return to the past - the days of bicycle transport, no refrigeration and less communication. What would you do?

Most drivers face a flat tire a few times in their lives. Does your car even have a spare tire? Do you know how to change it?

Preserving meat by drying is a way to store it without using additional energy. Did you know jerky can be made in the SunOven®? [Try it](#).

Add these techniques to your Project Noah recipes for making pioneer bread. Do you know how the hoe cake got it's name?

Studying individual plants is a life-long project. There is more to them than just recognizing the name in a recipe. [The Herbal Academy](#) teaches how to set up you own Materia Medica Journal to establish a more intimate connection with plants, one at a time. This project will help you get up close and personal with herbs.

Ask Billie

Q. I have a Global Sun Oven and would like to upgrade it to the new adjustment leg and the e-z sun track indicators. Is that possible?

A. Yes, you may order the Global Oven Retro - Fit Kit. It includes the extra thick glass door with the sun tracker installed, the dual purpose leveling rack, the wind resistant alignment leg. As as our Thank You for being a faithful Sun Oven® customer, we're including the virtural SunOven® Cookbook & Emergency Preparedness Organizer CD. Find it on our website [here](#).

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

Send your questions to editor@sunoven.com



Billie Nicholson



Order Your Sun Oven® Today

Self Reliance - Dealing with Debt

Money is the current medium of exchange for services rendered or products acquired from someone else. Everyone uses it. It's the way we get things we need and want. The money you receive for your work is considered income and when you use money to purchase items or services that's considered expenses. When you acquire items for which you cannot make a total payment immediately, that is debt. Debt is not a totally bad word. It only becomes that when you get more debt than you can handle repaying over time. That's when stress comes in. If you are tired of being stressed over money matters, it is time for you to get control of your personal finances.

The first thing you should do is write specific goals about what you want to do with your life and your money. Then divide these goals into short term and long term goals. Know that long term goals can be in progress while you work on the short term ones. Next step is to prioritize which goals you want to achieve first. Then create a plan to reach those goals. It will have many steps, the first of which is to get control of your budget. This will allow you to decide how to spend your money and to keep you focused on what is important to you. [1]

Tracking your expenses for a month and categorizing them will give you an idea of where your money is going. Divide them into fixed and variable expenses. Fixed expenses are a definite amount due each month, like a car payment. Variable expenses will need to be reviewed and are adjustable by making spending habit changes, like eating out. You can make the choice to spend more or less on these. Some expenses occur annually, semi-annually or quarterly. To fit these into a monthly budget, divide the amount due by the number of months between payments. You will set aside the necessary portion each month so you can pay it when it comes due.

So if you've spent last month tracking your expenses, you are now ready to set up a budget. This can be as simple as getting a dozen envelopes and writing down the category like rent or mortgage and putting the amount of money in it from your cashed check. Or you may decide to get a digital software program and use that to set up your budget. There are a variety of programs available. 10 of them are reviewed [here](#) and another one is [Every Dollar](#). If you are doing online banking and use credit and debit cards, select one that will connect your bank accounts to it and will allow you to access the program on your mobile devices as well as from your desktop computer.

Now that you have a glimpse of the "big picture," the next step is to pay your future self and build financial security by establishing an emergency fund. Start with the goal of \$1,000. [2] A one month's expenses savings will be next. This fund will create a safety net plus it will give you a sense of self-confidence and control. Use the remainder of your money to pay for current living expenses.

A budget plan is a moving target, so you must learn to be flexible. If you go over spending in one category or another, don't give up. First review your spending. Do you need to readjust that category? It may take several months to get it right, just don't quit.

Once you're stabilized, the next step is to begin the process of getting out of debt. Make a list of your debts and include the minimum payment amount, the interest rate and how much you owe. Include credit cards and personal loans, student loans and any money you owe family or friends. Then rank your debts in the order you want to pay them off. You can start with the smallest to largest or you can go by highest interest rate to lowest.[2] If you start with the smallest debt as your first payoff goal, make minimum payments on all other debts and focus the most money on the smallest one. When it is paid off, take that amount and add it to the minimum payment of the next debt on your list. As these debts disappear, you will feel the momentum. [3]To find extra money to pay off debts, you may need to cutback spending in some of the variable expenses mentioned earlier. Just stick to it, you can do it!

When you finish paying off a credit card, put it away. If you are charged an annual fee for the privilege of having it, cut it up and cancel it. Next month - what and why of insurance.

References

Essential Oils for Healing



Peppermint

© Billie Nicholow

If you have ever experienced the scent of a rosemary bush, you've experienced the aromatic qualities of an essential oil. Having been around for thousands of years, various cultures have used them for medicinal and health purposes. You will find them used in aromatherapy, household cleaning agents and beauty care products as well as natural medicine treatments.

Essential oils are simply a concentrated form of the oils found naturally in the flowers, leaves, bark, stems, seeds and other parts of plants. When the oils are extracted, they maintain the characteristic fragrance, or essence, of that plant.

The method of extraction varies from oil to oil, depending on the part of the plant that was used to obtain the oil. Most are steam distilled and some like citrus oils, are cold pressed. The essential oil is literally the life force of the plant. Oils serve as the defense system in plants. They oxygenate the plant and carry

nutrients, vital elements and chemical constituents to every cell in the plant. They contain the healing nutrients including trace minerals, vitamins, hormones, amino acid precursors and other components. They give the plant the ability to destroy infections, stave off infestations, initiate and maintain growth and repair structural damage.

In addition, essential oils have the capacity to change the electrical frequency of the body. When frequencies drop, disease sets in. Essential oils have the highest frequency of any substance known. As living substances, their frequency is harmonic with the human frequency. When we come in contact with them, our body frequency is raised to a degree that we become inhospitable to pathogenic organisms. [1]

There two major ways essential oils can be used: 1. inhaled often through a diffuser that distributes the plant's essence into the air, entering the body through the respiratory system. 2. Absorbed through the skin.

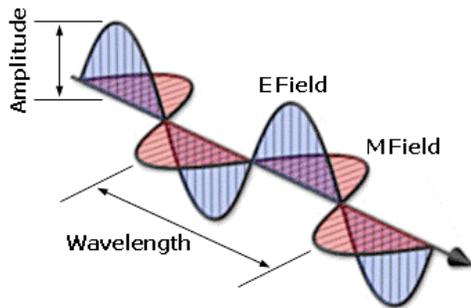
When oils are diffused through the air they can kill most air-borne microorganisms. Choose oils that benefit respiratory problems. Inhalation allows the oils to come into direct contact with the mucus membrane lining. There are 800 million nerve endings in the nose that detect odors. The olfactory system in the nasal cavity activates the limbic system of the brain that then activates the endocrine system to stimulate moods as well. Aroma therapy can have mild or profound psychological effects from uplifting the spirit, to promoting mental alertness. Studies have shown that lavender oil reduces stress and improves patients with heart disease and that peppermint relieves nausea, vomiting and headaches. [2]

When applied to human skin, essential oils carry the same healing force as they do to the plant. They are highly concentrated, at least 50 time more therapeutically potent than the plant itself or herbs made from the plant and need to dispersed in carrier oils (like almond, jojoba, olive or coconut). Essential oils detoxify the body. Oxygen pushes unwanted chemicals out of the cell. Normal cell function and balance is established only with sufficient oxygen. They are soluble with the lipids in the cell membranes and penetrate into the cells. When applied to the skin, within 21 minutes, essential oils will penetrate every cell within the body. [1]

The benefits of essential oils come from their antioxidant, antimicrobial and anti-inflammatory properties. [3] Be sure to use pure essential oils that are 100% pure oil extracted directly from the botanical plant source without any synthetics or impurities. The internal use of essential oils should only be administered under the supervision of a healthcare practitioner. Based on the composition of an oil, there may be areas of the body where it can be applied and others that should be avoided. Check the product label.

References

EMPs and You



Waves of Electromagnetic Radiation

An electromagnetic pulse is caused by the detonation of a nuclear device at high altitude over the target area. An EMP can also be caused by a solar storm. The electromagnetic pulse generated by such an attack or event can destroy electrical power infrastructure and electronic devices, knocking out the power for hundreds of miles.

An EMP attack may not wipe out all electrical appliances at once. Some electronic devices will be destroyed, but others will not. Power will be out in some areas but may remain on in others. Some experts say

vehicles won't be affected, while others say they could be. Small electronic devices not switched on and not connected to the power grid may not be affected.[1]

The reason an EMP could potentially be the most harmful weapon is that it has long term effects. It doesn't wipe out your food. It wipes out your ability to make or acquire food. It doesn't wipe out emergency medicine, it wipes out the ability to administer emergency medicine. It doesn't wipe out our military, it destroys their ability to communicate. The effects are multi-dimensional because of the interdependency of so many electronic parts of our lives. Survivors will need to know basic skill sets and have some simple tools. Expect the same types of hardships as would occur during any natural disaster:

- Loss of electrical power, water and heat
- Temporary social disorder
- Temporary unavailability of food
- Temporary breakdown of emergency services[2]

Life after an EMP will require the acquisition of water and it's purification, food supplies should have been thought of in advance, first aid supplies especially medications for persons with complex medical situations, self defense needs to protect what you so carefully accumulated, communication equipment, transportation and clothing.

If you are not prepared for an EMP, you will find yourself in a world falling apart around you. The things you do in the first five minutes can save your life.

- If you have advance warning, unplug all electronic devices and shield them. Every home with a microwave has a Faraday Cage. Put your devices there.
- Make sure family and friends are where you can protect them. Get inside into the center of your home where multiple walls can act as barriers.
- Lock your doors and secure your home. Watch for looters. Establish a rotating watch. Someone should be awake at all times.
- Keep an eye out for fires. Electrical sparks may start small fires which if unchecked can become big fires.
- Listen to a portable AM/FM radio to keep up with what is happening in your area.

Many experts have reviewed the possible scenarios for an electromagnetic pulse and predict that within a very short time 90% of the population will be dead. You don't have to be one of those statistics, if you are prepared.

References



Photo: Wikipedia.com

Fixing a Flat Tire

Ehow.com

Most drivers face a flat at least a few times in their lives. Although it can be daunting the first time you attempt it, changing a flat tire is not difficult. Almost anyone can do it in less than 15 minutes - less time than it usually takes for a tow truck to arrive.

The first thing to do is to familiarize yourself with your vehicle's owner's manual. Most cars have a spare tire and equipment in the trunk or under a back seat. Locate the tools and determine

where to place the jack under the auto's body. Learn how to use the tire iron to release the bolts and the safety suggestions that will allow you to successfully change a tire before you need to know. Check your spare tire every couple of months to make sure it's up to pressure, it will be useless if it is a flat as the tire you're taking off. Add some of your own equipment to make the flat changing experience more comfortable. Include a four-way lug wrench, a large screwdriver, and a 12" x 12" piece of 3/4" plywood to place under the jack. This will keep jacks from sinking into the grass or mud when you're off the highway. In addition, carry 2 short pieces of 2 x 4" lumber to serve as wheel chocks, to keep the car from rolling off the jack. In addition, include a pair of leather work gloves, a plastic rain poncho, a roll of paper towels, a flashlight with good batteries, and a pair of work shoes.

When a tire blows, do not panic. Don't make any drastic moves. Turn your flashers on and slowly and safely pull off the road. Find a spot that is visible but not far away from traffic. Avoid soft shoulders or inclines. Once stopped, put up the hood as an indicator to other motorists that you are having mechanical problems. Set the hand brake and put the transmission in park (or first gear for manual transmissions) so the car will not roll. Then set a few flares out on the road at 10 foot intervals.

Open the trunk, take out the spare tire and tools as well as the extra equipment you packed. Chock the other wheels, especially the one on the tire diagonally opposite from the flat one. This is the wheel that will have the most weight on it when you jack up the car. Begin by removing the hub cap from the wheel, if so equipped. Then using the lug wrench, break all of the lug nuts loose. This will not be easy because they were tightened by an air-wrench. Position the lug wrench at about the 10 o'clock position. That way you can push down (counter-clock-wise) with your body weight or shove down on it with your foot. If one lug nut looks different from the rest, and the lug nut doesn't fit it, you have locking lug nuts to prevent wheel theft. Check the glove box for a special key that fits this lug nut and makes removal with the lug nut wrench possible. Break them loose while the wheel is still on the ground. At no time should you lay down with your legs in the highway or crawl under it.

Then position your jack in the factory jack point nearest the flat tire. Remember to use the 12x12 piece of plywood under the jack, if on soft ground. Double check the jack's position to make sure it is lined up and the jack is vertical and not leaning. Lift the vehicle until the flat tire dangles about two - three inches off the ground. Finish loosening the lug nuts, laying them on the ground next to the jack or in your pocket (so you can find them). With the nuts off, lift straight up slightly on the tire and pull it backward and off the wheel studs. Lay it on the ground face up to avoid scuffing the rim face.

Install the spare tire, making sure the air valve stem is facing out. Spin the tire on the ground so the wheel holes are in the same orientation as the studs on the wheel hub. Pick the tire straight up and hang it on the top wheel stud. Turn the wheel slightly to align the other holes. Push tire back until rim is flush against the wheel hub. Replace the lug nuts, starting at the bottom nut, tightening them by turning clockwise, two or three times, or until it stops. Go to the lug directly across from it and do the same. Continue in this pattern until all nuts are tight. Lower the vehicle, remove the jack and tighten lug nuts around with the same pressure. Load up all the equipment and the flat tire. Drive cautiously to nearest tire shop to check spare's condition.

Making Jerky

Are you a beef jerky fan? Lots of folks recommend making your own to save money and get the flavor you want. There are a variety of tools to use to make it and the recipes are endless. This is usually a two day process. Start with deciding what type of equipment you'll use. The options are:

1. Dehydrator
2. Oven
3. [Box fan, A/C filters and bungee cords](#)
4. [Sun Oven](#) - dehydrating

Procure a lean piece of meat - beef, deer, elk, turkey, etc. about two pounds. Cut off any fat layers. This will taste yucky when meat is cured and can go rancid if stored for a while. Place meat in freezer to firm it up. It will slice easier when firm but not frozen solid. Make sure you use a sharp knife. If you're worried about cutting yourself, wear a protective glove on your hand. Slice the meat cross grain to diagonal of the grain (some difference of opinion here) for ease of chewing. Slices should be 1/8" strips. Think thick bacon.

Make a [marinade](#) for the meat using:

- | | |
|-----------------------------------|--------------------------------------|
| 2/3 cup Worcestershire sauce | options can include: |
| 2/3 cup soy sauce | 1/2 TBS minced garlic |
| 1 TBS honey | 1/4 TBS turmeric |
| 2 tsp freshly ground black pepper | sliced jalapeno pepper |
| 2 tsp onion powder | |
| 1 tsp liquid smoke | |
| 1 tsp red pepper flakes | |

Place meat strips into 1 gallon zip lock bag(s) and add the marinade. Make sure all slices are covered. Squeeze out the air and seal. Place in refrigerator over night. Next day drain slices on paper towels and place in dehydrator. Note: if you are using an oven, line the bottom with aluminum foil and spray racks with non-stick cooking spray; if using dehydrator, make sure solid liner is on the bottom below the lowest rack to catch drips and moisture as it leaves the meat.

Spread slices so they do not overlap. Set temperature to 160°F. Leave oven door cracked to allow air flow. Dry for 5-6 hours. Check meat for doneness. If it breaks when bent, it's over done. It should bend and tear easily. Allow to air cool completely. Testing along the way is allowed.

When using the Sun Oven®, use parchment paper on the racks, leave the latch open with one latch turned in between the glass and the black gasket. At the end of first day of drying, simply leave everything as is, latch to seal and reopen and continue the drying process the next day.

Store in airtight container for up to 1 month at cool temperature, 3 months in refrigerator or 6 months in freezer, if you can keep it that long.

Tips:

- Always wash hands with soap and water before and after handling raw meat. Use clean equipment and utensils.
- Use fresh meat within 3-5 days.
- Low heat is meant to dry meat not cook it.
- Poultry temperature should be 165°F



[Photo: Commons.Wikimedia.org](#)

Sun Drenched Chicken Adobo from Our Solar Chef



You can cut up a whole chicken to make this simple yet extremely pleasing chicken dish. I like thigh meat best, so that's what I use.

Ingredients

3 pounds bone-in chicken thighs, skin and visible fat removed

2 bay leaves

5 cloves garlic, minced

3/4 cup soy sauce

1/4 cup apple cider vinegar

1 tablespoon grated fresh peeled ginger (optional)

1/2 teaspoon black pepper

1 tablespoon brown sugar

1 tablespoon cornstarch

1/4 cup chicken broth

Green onions for garnish, thinly sliced

Directions

Preheat Sun Oven®

Arrange the chicken thighs in a single layer in a baking dish. Nestle the bay leaves among the chicken. In a medium bowl, mix together the garlic, soy sauce, vinegar, ginger, pepper, and brown sugar. In a small bowl, whisk together the cornstarch and broth until smooth. Mix the cornstarch mixture into the soy sauce mixture. Pour the mixture over the chicken, turning the thighs to coat. Cover the pan with a second baking pan and transfer to the Sun Oven. Bake until the meat is fork tender, 1 1/2 to 2 hours. Garnish with green onions. Serve with rice.

Makes servings.

Survival Breads

Breads cooked over the coals of a campfire on a stick or in a skillet are a welcome treat after hiking or just being outside in the cool air all day. Have you ever cooked bread without an oven? These recipes are some old ones that could easily have been baked at the end of a day around the evening fire.

Bannock Bread - Originating from the Scots, bannock is a thick, flat cake, made of oatmeal or barley and cooked on a griddle. Traditionally an unleavened bread, today's recipes add baking powder. Current recipes encourage cooking them in a greased, cast-iron skillet nestled in hot coals. A bannock usually requires about 10 minutes cooking time per side. Served warm they resemble a scone in texture.

Ingredients

- 3 cups all-purpose or whole wheat flour
- 1 tsp. salt
- 2 Tbsp. baking powder
- ½ cup powdered milk
- 1 tsp. sugar
- ¼ cup shortening (lard, bacon grease, melted butter, canola oil)
- 2 cups water (approximately)
- Additional oil if you'll be frying in a skillet or Dutch Oven

Instructions

1. Mix dry ingredients well in large bowl or zipper close plastic bag.
2. Add shortening; work it into dry ingredients until you get an even meal consistency.
3. Add about half of the water and start to stir and mix with a fork.
4. Keep adding water and mixing until you get a good kneadable dough consistency. DO NOT make it a thin batter.
5. Turn out the dough onto a floured flat surface (another plastic bag or waxed paper) and knead for a minute or two.
6. Press into paddies about ¾-inch thick for frying or a general loaf shape for baking.
7. Cook until a deep golden brown on both sides, and a toothpick inserted in center comes out clean.

Bread on a Stick - Wrap this dough around a green stick acquired while hiking. For a pleasant surprise, thread a hot dog on the stick first

Ingredients

- 1 cup self-rising flour (if using all purpose flour add 1 tsp baking powder)
- 1 tsp sugar
- 1 tbsp butter
- 1/2 - 1 cup milk
- pinch of salt

Instructions

1. Rub the butter through the flour until it is all crumbly.
2. Mix the salt, sugar and a little milk at a time until it forms a dough.

Continued Page 9

Survival Breads continued from Page 8

3. Divide into two pieces and roll into a snake shape. Wind around a clean, dry stick. Hold over the campfire coals to cook for about 10 minutes.
4. Patience is the word here, turning gradually so bread cooks through and doesn't burn on the outside.

Hoe Cake - Cornbread made minimalist, these thin, unleavened rounds are made from the simplest batter (cornmeal, water and salt). They can be cooked in oil in a cast-iron skillet or by the side of hot coals in a campfire on the curved metal side of a hoe. There have been mixed stories about the origin of the name of this cornmeal treat, some crediting it to the ingenuity of African-American cooks, but earlier [historical references](#) suggest that it was an English corruption of an Indian word, "hokeg." The word "hoe" was a colloquial term for griddle dating back to the 1600's in parts of England, where baking on boards or griddles was commonplace.

Yield: Two 6-inch cakes (2 to 3 servings)

Time: About 1 hour, partially unattended

Ingredients

- 1 cup fine-ground white or yellow cornmeal
- Scant ¼ teaspoon salt
-
- 3 tablespoons peanut oil

Instructions

1. Bring a kettle of water to a boil. Put the cornmeal and salt in a large bowl, and whisk in 1 cup plus 2 tablespoons of the boiling water. Let rest about 10 minutes.
2. Stir in 1 tablespoon of the peanut oil. The mixture should be just pourable, but thick enough that you'll need to use a spoon or spatula to help spread it out once it's in the pan. If it seems too thick, add another tablespoon or two of hot water.
3. Put the remaining 2 tablespoons oil in an 8- to 12-inch skillet over medium heat. When it's hot, spoon in about half of the cornmeal mixture, and, using a spatula or the back of a spoon, spread it into a round about 6 inches in diameter. Cook until the hoecake is golden around the edges and looks set throughout, about 10 minutes, then begin to loosen the edges with a spatula. When you've fully released the hoecake from the pan, gently flip it. Cook another 8 to 10 minutes, then transfer to a plate. Repeat with the remaining cornmeal mixture. Serve warm.

Survival Bread - Designed to last indefinitely, this bread contains stable, non-perishable ingredients. Store it in your Bug-Out-Bag in an airtight container. Something about the Jello ingredient leads me to believe that this is not a pioneer recipe.

Ingredients

- 2 cups oats
- 2 1/2 cups powdered milk
- 1 cup sugar
- 3 Tbs honey
- 3 Tbs water
- 1 pkg. lemon or orange Jell-O (3oz)

[Read More](#)

Making Your Own Materia Medica



SAGE

Salvia officinalis

Are you interested in plants and their benefits to us? As you begin to pursue this adventure, you will quickly become overwhelmed with the vast amount of information available. The Herbal Academy recommends studying one plant at a time. This will allow you to delve deeply into its mysteries and develop a greater appreciation for the plant.

One of their favorite ways to keep the spark of excitement for herbal studies is by working on a materia medica. In support of this process they have created an Herbal Materia Medica course to guide you in creating your own materia medica.

Materia medica is a Latin term meaning “healing materials.” With plants, this is a body of knowledge describing how plants have been used therapeutically. Throughout most of human existence, plants have been virtually all that was available to healers and those who wanted to be healed. This is still true outside the developed

world. Records over the centuries show that herbalists have been using many of the same plants for the simple reason that those remedies work.

In depth studies of historical and modern writings allow the student an opportunity to tease out the links between them. Such detailed studies are referred to as monographs. They should be a compilation of not only historical and current research by others but also your own observations and experiences with a plant. The goal is to develop a well-rounded understanding of a given herb. Keeping your own records will give you a reference source to which you will return again and again.

To begin your materia medica, set up a dedicated notebook where you can consolidate the information you collect. Then choose herbs that you would like to know more about. Choose 5 herbs that relate to a specific theme, like 5 herbs for a body system (respiratory, cardiovascular, urinary, etc.), 5 herbs for a body imbalance, or 5 herbs which grow local to you. Select herbs that grow in your garden or wild so you will be able to spend time observing them in their habitat.

Once you have made your herbal selection, get some. Having the ability to grow your own or know where some grow in the wild will give you an advantage. Correct identification is critical to your safety when working with herbs. Select some reference books to use “in the field” as well as some online resources. Then it’s time to start gathering information.

Information to add includes: Botanical name which consists of an internationally recognized name consisting of two parts in a Latin name: genus and species. for example, *Salvia officinalis*; Common name; Family name (organized by similar characteristics); Traditional Chinese Medical and/or Ayurvedic (whole-body healing system developed more than 3,000 years ago in India) name.

From there, learn about the plant’s history, native range, geographic distribution as well as the botanical description used to identify it in field guides or gardening books. This information will help bring the ingredients in that dried tea bag to life. Next, which parts of the plant are used? What chemicals does it contain? What influences does it have on the human body? How is it used to support health? Then it will be time to get to know the plant by making some preparations and sampling them. Be sure to follow preparation recommendations in the literature.