Philmont Scout Ranch
17 Deer Run Rd.
Cimarron, NM 87714

Official Philmont Shakedown Guide – Part 1

Revised: September 1st, 2017
Refer to Philmont's website: www.philmontscoutranch.org for updates to this guide and the most up-to-date information regarding your trek.

This guide is intended to be an all-encompassing tool for crews to utilize in order to prepare for an upcoming Philmont trek. It is highly recommended that crews participate in at least two shakedown hikes prior to their trek. To help facilitate this, we have split this guide into two separate documents to allow the crew to focus on different topics on each hike.

In Part 1, we will cover crew leadership positions, gear and food selection, conditioning tips, and backcountry camping practices used at Philmont.

Crew Positions

- **Crew Leader** – Responsible for organizing the crew, assigning duties, making decisions, and recognizing the capabilities of each crew member. He/she leads by example and practices servant leadership to allow the crew to have an enjoyable and successful trek. The Crew Leader should have leadership capabilities that are respected by everyone and should be selected prior to the first shakedown hike. Successful Crew Leaders exhibit the following traits: positive attitude, attentiveness to all crew members' needs, and the ability to identify and resolve conflicts before they develop into larger issues.
- **Chaplain's Aide** – Responsible for leading the crew in following the 12th point of the Scout Law. They help the crew earn the Duty To God Award and lead daily devotionals from the *Eagles Soaring High* Booklet as well as facilitating Roses, Thorns, and Buds each night. The Chaplain's Aide should be selected by the crew prior to the first shakedown hike. On the shakedown hikes, it is a great time to start Roses, Thorns, and Buds with the crew. During Roses, Thorns, and Buds each crew member will say their rose (something they liked about the day), thorn (something they disliked about the day), and bud (what they are looking forward to tomorrow or in the near future). Each crew member should be allowed to talk uninterrupted to allow this exercise to facilitate crew bonding.
- **Wilderness Pledge *Guia* (Guide)** – Responsible for helping the crew understand and follow the principles of the Philmont Wilderness Pledge and Leave No Trace. They help the crew earn the Wilderness Pledge Achievement Award with the help of the Ranger. They also help enforce Philmont's bear procedures. The Philmont Wilderness Pledge reads as follows:

> Through good Scout camping, I pledge to preserve the beauty and splendor of the Philmont wilderness. I commit myself to:
>
> **1.** An absence of litter and graffiti
> **2.** Respect for wildlife
> **3.** Conservation and proper use of water
> **4.** Respect for trails and trail signs
> **5.** Proper use of campsites

The seven principles of Leave No Trace are:

1. Plan Ahead and Prepare	**5.** Minimize Campfire Impacts
2. Travel and Camp on Durable Surfaces	**6.** Respect Wildlife
3. Dispose of Waste Properly	**7.** Be Considerate of Other Visitors
4. Leave What You Find	

The Wilderness Pledge *Guia* should be selected by the crew prior to the first shakedown hike and should help the crew follow these two wilderness ethics both at home and at Philmont.

- **Lead Advisor** – The Lead Advisor is the principal Advisor responsible for coordinating a successful Philmont experience for each member of the crew. All adults support the Lead Advisor in accomplishing the duties of the Advisor. Advisors' main role is to coach, mentor, and support the Crew Leader, Chaplain Aide, and Wilderness Pledge *Guia*. By doing this, the youth leaders will gain leadership experience throughout the trek and will be able to help all members of the crew develop into a strong team. The second primary role of advisors is to ensure the safety and well-being of each crew member:

  First aid treatment; Administration of required medications; Proper water purification; Any time a stove is in use; Guidance and support of the crew through emergency situations.

  Advisors also help foster positive crew dynamics, help settle disputes between members of the crew, assist with administering proper discipline if required, and ensure that the crew operates following all youth protection guidelines.

Gear Selection

Your Ranger will cover a gear shakedown with you in Base Camp before you depart for the backcountry. The purpose of the gear shakedown is to ensure everyone has the appropriate gear and clothing before leaving for the wilderness and to make sure unnecessary items are stored in Base Camp to save weight and bulk. Here is a list of the items most commonly asked about while preparing for a trek:

- **Backpacks** – Internal frame packs are highly functional and most commonly used. The pack needs to have a padded hip belt. Anything between a 65-85 liter carrying capacity will fit personal gear, crew gear, food, and water. To properly pack an internal frame backpack, place the heavy gear along the spine and close to the hiker's back to keep the center of gravity forward and low. Lighter gear should be packed at the top of the backpack and on the outer edges of the main compartment. Sleeping bags usually fit at the bottom of the pack. Avoid having loose/dangling gear, as it is more likely to get caught in vegetation and requires you to exert more energy to offset its swaying motion. Backpacks are available for rent from Outfitting Services in Base Camp for $30 (this includes a pack cover as well). This is a great option for youth who you know will outgrow a pack in a year or two.



  - A video titled*: "How To Pack A Backpack"* can be found on YouTube at: https://www.youtube.com/watch?v=MA9nSJ7RuYY
  - A video titled: "*How To Fit A Backpack"* can be found on YouTube at: *http://www.youtube.com/watch?v=V8OMUn-tFoY&list=PL34836244149F115A*

- **Boots** – Mid- to high-top boots are highly recommended for ankle support on rocky, uneven trails. Boots should be well broken in before a Philmont trek. Waterproof boots are recommended: keeping your feet dry is one of the biggest keys to a successful trek.
    - A video titled: "*Choosing Your Hiking Boots"* can be found on YouTube at: *http://www.youtube.com/watch?v=fG5UICHIWA8&list=PL34836244149F115A*
- **Stream Crossing Shoes** – Due to recent changes in annual weather patterns, streams at Philmont are running at their highest levels in 15 years. It is impossible to keep your feet dry in many stream crossings. It is highly recommended to bring camp shoes that can double as stream crossing shoes to prevent having to use hiking boots to cross knee-deep water. Old tennis shoes work great for camp/stream crossing shoes because they are lightweight, closed toed, can pack up small, and don't cost anything since you already have them and can easily recycle them at the end of the trek. After crossing a stream, tie the stream crossing shoes to the outside of your pack to let them dry off. They will be dry by the time you get to camp and it will be nice to let your feet flex and air out while wearing these shoes.
- **Tents** – Philmont requires closed-walled tents to prevent rodents, snakes, scorpions, and spiders from entering your sleeping facility. Two-person tents are required, as it is often difficult to find a spot to set up a larger tent in forested campsites. Mountain Safety Research (MSR) partnered with Philmont in 2012 and developed the Thunder Ridge tent specifically for use at Philmont. The MSR Thunder Ridge is a two-person, three-season tent and is available for crews to use free of charge while on their Philmont trek. Each MSR Thunder Ridge tent is washed using Nikwax Tech Wash® upon returning to Base Camp to ensure all Philmont-issued tents are clean and waterproof. Ground cloths (not provided) are required for use with the MSR Thunder Ridge tents and the dimensions of the tent are 88" x 54". Lightweight materials such as Tyvek work great as ground cloths and are affordable if purchased in bulk for the crew.



- **Sleeping Bags** – Philmont recommends a 20ºF temperature rating on sleeping bags. Synthetic bags are easier to care for than down bags but a synthetic bag will not compress as small and will weigh more than a down equivalent. If a down bag is used at Philmont, it is recommended that the person using it is very experienced in its care since down loses all insulation value once wet. Sleeping pads are also highly encouraged for added warmth.
- **Stoves** – White gas stoves are most commonly used at Philmont. Models such as the MSR WhisperLite, MSR DragonFly, and the Optimus Nova are great stoves for a Philmont backpacking trek. White gas stoves are preferred by most crews because they are more efficient at higher elevations and colder temperatures and the fuel bottles are refillable, making them more environmentally friendly than canister stoves. Canister stoves such as the MSR

WhisperLite Universal and Optimus Vega are acceptable stoves for a Philmont trek due to their design of separating the canister from the stove, making it much more stable and safer than a typical canister stove that screws on directly above the fuel canister. Although they should not be used for cooking meals, canister stoves such as the MSR PocketRocket, Optimus Crux, and Jetboils work great for small items like boiling water for coffee. (It is important to never use a windscreen with one of these stoves due to the fact that the heat source and fuel are both in the same enclosed space, making it highly combustible.) Backcountry commissary camps can refill white gas and have canister fuel available for purchase. It is recommended that a crew has approximately 6 oz. of white gas carrying capacity per person. Open flame stoves without a shutoff valve like BioLite stoves or alcohol stoves are not allowed at Philmont for safety reasons and wildfire risk.

  - A video titled: "*Choosing The Right Stove For Philmont"* can be found on Philmont's YouTube channel at: *http://www.youtube.com/watch?v=aqWkvuVDJzc*

- **Pots** – Philmont requires all crews to use at least two pots. Both pots must be at least eight-quarts in size. The purpose of having the second pot is for the dishwashing process which requires one pot for washing and one pot for rinsing. All utensils will be sanitized in the early stages of the following meal's preparation process. The full dishwashing process (wash, rinse, and sanitize) is very important in the backcountry in order to prevent sickness on the trail. Eight-quart pots are available for crews to use from Outfitting Services in Base Camp free of charge.



- **Patrol Cooking Method** – As mentioned above, crews are required to use two pots in the backcountry. The eight-quart pot is used for boiling water and re-hydrating food while the second pot is for dishwashing. Turkey bags or other bags used as a barrier between the cooking pot and the food are not allowed at Philmont due to the amount of extra trash created, which in turn requires extra use of gasoline for backcountry trash pickups. The purpose of the patrol cooking method is to give Scouts the opportunity to lead the cooking and cleaning processes during a meal in the backcountry by practicing servant leadership. By utilizing the crew duty roster, a Scout will be the assistant cook/dishwasher one night then the lead cook/dishwasher the following night.
  - A video titled: "*Philmont Backcountry Cooking Method"* can be found on Philmont's YouTube channel at: *http://www.youtube.com/watch?v=UA_Q1ZnJDvQ*
- **Bear Ropes and Bear Bags** – Philmont requires crews to use two nylon bear ropes measuring 100' in length and ¼" in diameter to hang all smellables (A smellable is anything that might attract a bear. For a more detailed list, see the "Setting Up Camp" section). Bear ropes and bear bags are available for crews to check out from Outfitting Services in Base Camp free of charge. Crews are allowed to bring their own bear ropes and bags but the ropes must be the

same dimensions as Philmont's (100' x ¼") and the bags must be able to be tied or clipped to the rope. Pulley systems are not allowed for use at Philmont due to their tendency to get jammed, their weight, and their lack of having two tie-off points. Two tie-off points are required so that if a bear cuts one line, the bags will still be suspended by the second line.
    - A video titled: "*How to Hang a Bear Bag*" can be found on Philmont's YouTube channel at: https://www.youtube.com/watch?v=DN2y50oUcS8
- **Water Purification** – Katadyn Micropur® tablets are issued to purify untreated water at Philmont. These tablets are lightweight, pack down to almost nothing, and are provided for free. They kill protozoa, bacteria, and viruses whereas filters are only effective against protozoa and bacteria. You may bring water filters if you would like but it is not necessary due to the Micropur tablets you will receive in Base Camp.
    - A video titled: "*What You Need To Safely Treat Water In The Backcountry"* can be found on YouTube at: *http://www.youtube.com/watch?v=GZAiUVfpDuI*

Menu

The Philmont trail menu is easy to replicate and your crew can practice cooking on your shakedowns with the same kind of food you will be eating on your trek. Although the 2018 trail food menu may differ, here are examples of a few trail meals Philmont used in 2017:

Breakfast	**Lunch**	**Dinner**
Instant oatmeal	Club crackers	Jambalaya pasta
Pop Tarts	Cheese wedges	Beef stick
Granola bar	Beef and cheese stick	Fruit and nut trail mix
Turkey sausage links	Honey Stinger chews	Pecan sandies
Hot cocoa mix	Corn Nuts	
	Gatorade	

The complete 2018 trail meal menu is available online at:
http://philmontscoutranch.org/TrekPreparation/Dining.aspx.
Look to the icons on the right side of the webpage for links to the ingredients list. The 2018 menu will be posted after April 1st, 2018.



2017 trail meals are available for purchase for $5.00 a bag. Each bag feeds two people. 2017 trail meals can be purchased online at:
http://philmontscoutranch.org/~/link.aspx?_id=D5BEC69924704397B0C27E881D87CB69&_z=z

Physical Preparedness

It is crucial to successful individual and crew experiences that hikers are in strong physical condition for their Philmont trek. In order to get into physical shape that is appropriate for a Philmont trek, crew members need to start exercising at least eight months in advance. The most important aspects to focus on are aerobic/cardiovascular and lower body strength. Here are some activity suggestions for getting in shape:

- Go to your local high school football stadium and run/walk up the bleachers for an hour-long session twice a week. Turn it into a crew experience and have every crew member join, ensuring that everyone is in great shape. Once this activity becomes easy for you, bring your fully loaded backpack with you to get an idea of how your pack will feel, allowing you to tinker with your pack and figure out which settings work best.
- Go cycling twice a week. The distance is up to you: the leg workout combined with the cardiovascular aspect makes cycling a great preparation activity for backpacking.
- Keep track of your exercises by recording a logbook and post the activities you did over the past week on a crew-wide board at each troop meeting. This will let others know how dedicated you are to your trek and your crew and it will keep everyone accountable for getting into shape.

In addition to physical activity, eating right will go a long way in helping you get in shape for Philmont. A balanced diet is essential to healthy living and as Scouts we have all pledged to keep ourselves physically strong. It is crucial that all crew members – youth and advisors – be in excellent physical condition for their trek: the crew will be able to get to camp faster and have more time for program opportunities such as rock climbing, shooting, horseback riding, etc. while also having more energy in general. The hard work put into exercising now will pay off tenfold by the time of your trek.

Duty Roster

As mentioned previously, the duty roster is a great tool that allows Scouts to learn new skills and teach those skills to another crew member the following day. It also allows Scouts to rotate through positions so that a single job does not become monotonous over the course of a 12-day period. The positions that should be included on a duty roster are: cooking, cleaning, bear bags, water/fire, and navigator. When set up appropriately, a crew member will go from being the assistant of a task one day to the leader of that task the following day then back to being an assistant of a new task, with the cycle continuing throughout the trek. For smaller sized crews, youth crew members might have to do multiple tasks each day and adult advisors should expect to assist with duties (but never as a leader of a task, only as the assistant). Here is an example of an effective duty roster:

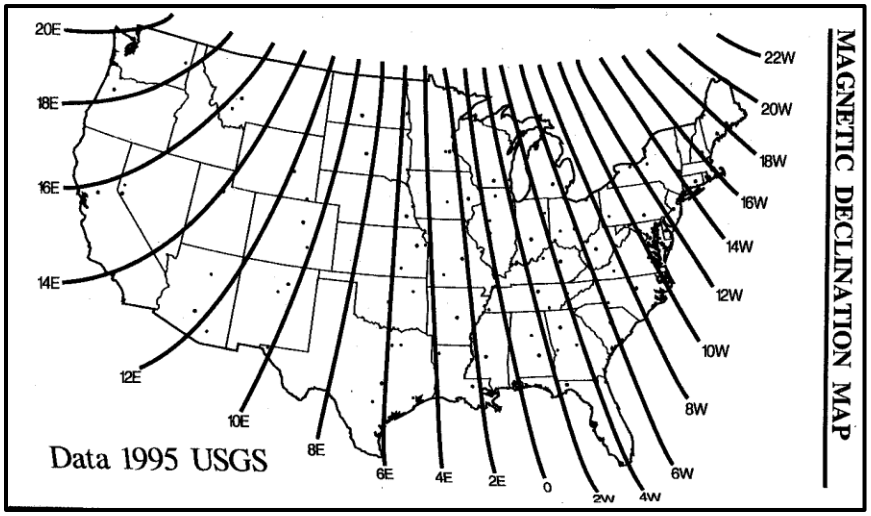
		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
Cooking	Lead	Eric	Colin	Caleb	Matt	Jason	Katie
	Assistant	Colin	Caleb	Matt	Jason	Katie	Kyle
Cleaning	Lead	Caleb	Matt	Jason	Katie	Kyle	John
	Assistant	Matt	Jason	Katie	Kyle	John	Baden
Bear Bags	Lead	Jason	Katie	Kyle	John	Baden	Eric
	Assistant	Katie	Kyle	John	Baden	Eric	Colin
Water/Fire	Lead	Kyle	John	Baden	Eric	Colin	Caleb
	Assistant	John	Baden	Eric	Colin	Caleb	Matt
Navigator		Baden	Eric	Colin	Caleb	Matt	Jason

The duty roster should be written by the Crew Leader before the trek occurs. Here is a general guideline for each of the four positions:

- **Cooking** – Responsible for setting up the cooking area, boiling water, sterilizing dishes, and re-hydrating and serving the food.
- **Cleaning** – Responsible for boiling water for dishwashing, washing and rinsing dishes and utensils, stacking dishes by the sump, and emptying dirty wash water into the sump using the food strainer and "yum-yum bags" (yum-yum bags hold the dirty scrubby pad piece and leftover food particles from the cleaning process). The crew members responsible for cleaning also ensure the food strainer, scraper, yum-yum bags, and trash are hung in the oops bag at night.
- **Bear Bags** – Responsible for dividing bear bags from oops bags (bear bags will stay hung until the following morning; oops bags hold the night's dinner, personal toiletries, medications, the first aid kit, etc. and are accessible for dinner and in case of an emergency), throwing bear rope over the bear cable, hoisting the bags, and tying the ropes off to trees. The two crew members responsible for bear bags should get the rest of the crew to help with the lifting and lowering of the bags due to weight and safety concerns.
- **Water/Fire –** Responsible for finding the closest water source, purifying, and bringing water back to camp. At some camps it will be a spring, well, or stream, all of which need to be purified. At other camps the water will already be purified and accessible from spigots. Water crew members should ask the rest of the crew to give them any of their empty bottles or bladders that need to be refilled. The crew members in charge of water retrieval can usually enlist the help of the advisors to help carry the water back to camp. Additionally, the crew members responsible for water retrieval will also be responsible for the building, lighting, supervision, and extinguishing of a campfire if there is no fire ban and your crew chooses to build one. Details for how to build a fire at Philmont can be found in the "Setting Up Camp" section of this guide.
- **Navigator –** Sets pace and hikes at the front of the crew, carrying a map and compass. At any trail junctions, orients the map and confers with the rest of the crew on which way to go.

Backcountry Skills

- **Navigation** – Before you begin hiking, always remember to check your map. To do this effectively, you must first orient your map. Orienting the map involves using a compass to align the map with true north. To find true north, you must account for declination (the angle difference between true and magnetic north). Declination changes depending on where you are on the globe; here is a map showing the degrees of declination for the lower 48 states:



The declination at Philmont is right around 10º east which means we set our compass at 350º. Once the dial is set to 350º, align a straight edge of the compass with a grid line on the map so that the compass, not the compass needle, is aligned with north on the map's compass rose (Figure 1). Then rotate the map (with the compass lying on it) so that the compass needle is pointing toward the N on your compass dial (Figure 2; known as "red in the shed"). Now the map is oriented and you can accurately decide which trail to take to your destination.

Figure 1

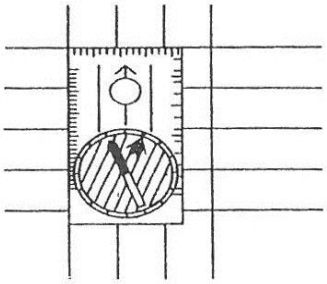
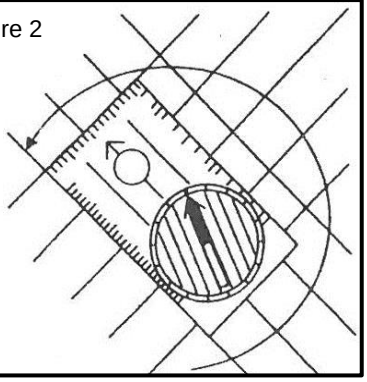


Figure 2



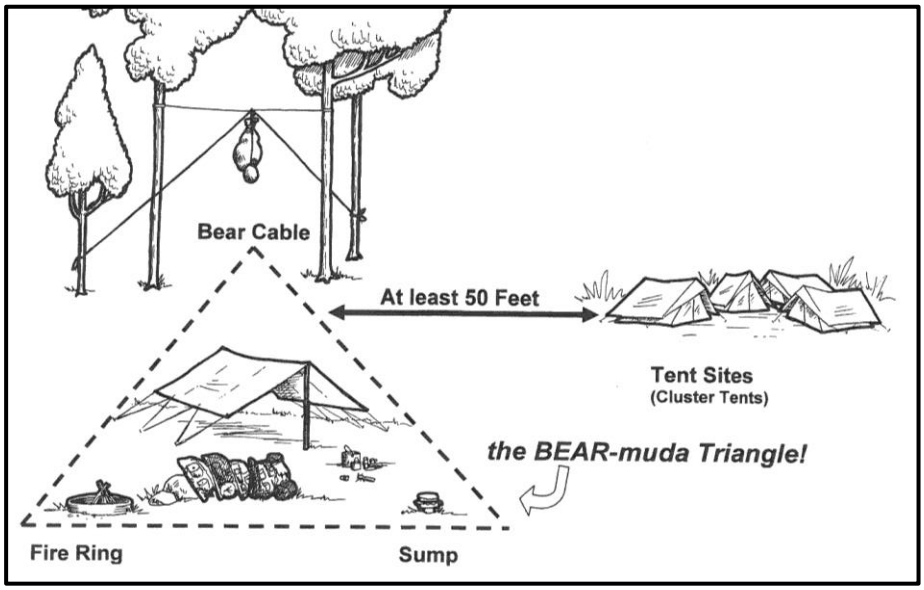
- A video titled: "*How To Use A Map & Compass*" can be found on Philmont's YouTube channel at: https://www.youtube.com/watch?v=VIh43ViXVY8

- **Starting the Hike** – The navigator should set a hiking pace that is comfortable for each crew member. Good communication between the back and front of the crew will help keep the crew hiking at a comfortable pace without getting separated. Crew members should be spaced out approximately every 8-10 ft. but a crew should never split up. Before a crew begins hiking, the navigator should ask the question: "Is anybody not ready?" The reason we phrase the question this way rather than, "Is everybody ready?" is because with the latter question all you would hear would be 11 voices saying "yes" and the one "no" would be drowned out.
- **Hiking Etiquette** – You will come across many crews over the course of your trek; knowing how to properly interact with them will help make your trek much more enjoyable. Additionally, proper hiking etiquette within your crew will help mitigate unnecessary tension and stress between crew members.
  - **Pace** – Your crew should choose a pace that keeps the crew together and allows the crew to hike for extended amounts of time without needing to stop and take a break. If one crew member is significantly slower than the rest of the crew, have them hike near the front of the crew so that they can easily communicate with the navigator/pace setter.
  - **Spacing** – It is common for crew members to hike too close together at Philmont and as a result, crew members are not able to see the views and wildlife all around them. It is recommended that crew members are spaced out about 8-10 ft. to allow them to look around and enjoy the views as well as stop in time if the person in front of them were to all of a sudden stop on the trail. The reason why you do not want your crew to be too spaced out is that part of the crew may go the wrong way at a trail junction, causing a search and rescue operation because the group was not hiking together as a solidary crew.
  - **Breaks** – Crews should take breaks when needed and anyone in the crew should feel comfortable calling for a break. There are two kinds of breaks: a five-minute or less

break and a 20-minute or more break. The reason for the two different breaks is the lactic acid buildup that will occur in your muscles after resting for more than five minutes. Lactic acid will leave your muscles feeling sluggish and you will exert much more energy if you hike during lactic acid buildup. After 20 minutes, the lactic acid will dissipate and your muscles will be able to move unrestricted. Additionally, make sure to never step on the critical edge of the trail, especially when taking breaks. The critical edge is the outside (or downhill) edge of the trail and stepping on it will weaken it and lead to the erosion of the trail.

- **Passing a crew** – If you encounter another crew heading in the same direction you are hiking, take a five minute break. If you approach them again, take another five minute break. If you approach them a third time, ask if you may pass. If you do pass the other crew, do not stop for at least 45 minutes to prevent the two crews from leapfrogging one another.
- **Another crew passes you** – As stated earlier, a crew hiking behind you will probably ask if they can pass you. If they do, let them hike in front since you may not have seen them the other two times they approached you. Once passed, taking a five minute break is a good idea just to give the two crews spacing.
- **Right of way** – When two crews meet on a hill and are hiking opposite directions, the crew hiking uphill has the right of way and the crew hiking downhill should step off the trail allowing the other crew to pass. The reason for this is that it is harder to get your momentum going uphill than downhill.
- **Pack animals** – Cavalcade crews or crews with a burro always have the right of way. Listen to the directions of the Horseman or Wrangler for which side of the trail to move to.
- **Stream crossings** – Cross streams and bridges one person at a time. Unbuckle your hip belt and sternum strap so that if you fall in, you can quickly escape your pack and avoid drowning. The navigator should continue about 30 ft. up the trail and wait for the rest of the crew. When the last person crosses the stream they should call out “All across” then the navigator will ask the question: “Is anybody not ready?” before hiking on.
- **Trekking poles** – If you decide to use trekking poles on your trek, make sure to use rubber tips to save our trails from erosion. Trekking poles can reduce the impact on your knees by up to 25% while backpacking but we have found that trails erode much quicker when the sharp tip of the poles are exposed.

- **Setting Up Camp** – When you arrive at your day’s destination, you will need to start setting up camp before anything else. The general rule of thumb is to take care of crew gear before personal gear. The order of campsite setup is as follows:
  - **Identify the Bear-muda Triangle:**
    - Fire ring
    - Sump
    - Bear cables



- Smellables always stay inside the Bear-muda Triangle
    - Smellables include but are not limited to:

• Food	• Soap and shampoo	• Sunscreen
• Trash	• Extra batteries	• Insect repellant
• Water bottles that have ever had anything other than water in them	• Film from disposable cameras	• Food strainer, yum-yum bag, and condiments bag
• Unwashed dishes	• Deodorant (should not have or use on trail)	• Clothes that have food or drink spilled on them
• Squishy bowls	• Foot powder	• Vomit
• Medicine	• Toothpaste/toothbrush	• Roll of duct tape
• Feminine hygiene products	• First aid kit	
• Tobacco	• Chap stick	

    - **Create three piles of gear around the fire ring:**
        - Food
        - Crew gear – dining fly, stoves, pots, bear ropes, bear bags, toilet paper, etc.
        - Personal smellables – toiletries, medications, etc.
    - **Decide what will go in the bear bags and what will go in the oops bag**
        - Typically, all food other than the night's dinner will go in the bear bags along with anything else that will not be needed until morning.
        - The oops bag typically has the night's dinner, the cleaning supply bag, personal smellables, the first aid kit, and smellable water bottles (a water bottle that has ever had anything other than water in it).
    - **Hang bear bags**:
        - Always check that there are at least two tie-off points behind you before throwing the rope.
        - Never attach a rock, carabiner, water bottle, or anything of weight to the rope prior to throwing over. The reasons for this are: 1) the weight could wrap around the cable and the rope will get stuck; 2) the weight could swing back around and hit someone; and 3) the carabiner could clip onto the cable.

- The rope should have a loop exactly in the middle. Fold the rope back so that you are throwing a 50 ft. double-line. Throw the end with the loop and make sure to hold the tail ends.
- Once the bear rope is over the cable, attach a weight-bearing carabiner to the loop you threw over the cable.
- Tie the bear bags to alternating sides of the loop by using lark's head knots.



1. Make a loop



2. Put your hand through the loop





3. Grab the two pieces of rope and pull through the loop



4. Make sure the entire top of the bag is through the knot
5. Move the knots as close to the carabiner as possible

- Pull the second bear rope (now referred to as the oops line) halfway through the carabiner.
- When all the bear bags are tied to the rope, have 6-8 Scouts pull on the free end of the rope to raise the bags. It is important that no one stands underneath the bear bags at any time in case they fall.
- When the tops of the bags are approximately 4” lower than the line, separate the two ropes and tie off to two separate trees. Use sticks between the bark of the tree and the rope to prevent girdling (permanent damage that kills the tree). Wrap the rope around the sticks and trunk of the tree at least three times and tuck the excess rope into the wrapped rope. The reasoning for tying off to separate trees is because if a bear knocks down or cuts one of the lines, there is still a second rope suspending the bags as a backup.



- If you will not be cooking dinner within the next 30 minutes, hang the oops bag.
- Tie-off the oops bag near the center loop of the oops line by using a lark's head knot. Pull the oops line to raise the oops bag to the bear bags and tie the two ends of the oops line to two unused trees. (If there are no unused trees, you may tie the oops line to the same trees the bear line is tied to. Make sure to leave at least a foot of separation between the oops and bear lines.) Wrap the rope around the sticks and trunk of the trees just like with the bear rope and tuck the excess rope away.
- The bear bags should be more than a person's wingspan away from the closest tree (at least 6 ft.) and high enough that the tallest person in the crew cannot touch them while jumping (about 10 ft.). These spacing requirements are intact so that a bear cannot climb the tree or stand on their hind legs and reach the bags.

- **Set up the dining fly**
  - Must go inside the Bear-muda Triangle, near the fire ring.
  - Whenever you are setting up the dining fly or a tent, keep in mind the four W's:
    - Wind – set up so that a corner is facing into the wind for stability
    - Water – avoid setting up over drainages that would flood when it rains
    - Wildlife – Avoid setting up over game trails, ant hills, gopher holes, etc.
    - Widow makers – avoid setting up under dead trees or limbs that could fall on you
  - Using a 25' x 1/8" rope and two small sticks, attach the dining fly to the rope using lark's head knots and tie-off to two poles using a clove hitch. (Hiking poles can be substituted in place of the aluminum poles.)




- Use a taut-line hitch to stake the rope into the ground.
- Stake the four corners. Stake the two sides too if you have extra stakes.



- The dining fly is a great place to eat if it is raining. No open flames should be under the dining fly at any time. Stoves, fuel bottles, and toilet paper should be stored under the dining fly at night. Packs should not be piled up under the dining fly because if one person left a smellable in their pack, every pack would be destroyed. It is better for everyone to put their pack cover on and lean their pack against a tree in the fire ring area. Additionally, packs are never clean and should be kept in the Bear-muda triangle at all times, not near tents.
- The dining fly may be tied to trees. This allows the dining fly to be tied in either the standard A-frame style (shown above) or a lean-to style. It also enables you to determine which style works best for the environmental element you are trying to eliminate (ex. A-frame for rain, hail, and wind; Lean-to for sun and shade).
    - The dining fly must still be setup within the Bear-muda Triangle.
    - When securing to trees, sticks must be placed between the rope and tree to prevent damage to the tree (as with bear bags).
    - If tying to trees, lines need to be tied at either 3 ft. and lower or 7 ft. and higher – tying between these heights may lead to injury.
    - Wrap the rope around the tree at least one full rotation then tie a taut-line hitch to make the fly adjustable and sturdy enough to remain secured in high winds.

- **Set up tents**
    - Tents must be at least 50 ft. away from any part of the Bear-muda Triangle.
    - Remember to check the four W's before setting up your tent.
    - Tents should be placed in a tight cluster about 5-7 ft. apart and not in any geometric shapes like circles, squares, or lines. The reason for this is because an animal may feel trapped if it walks inside the circle and may become aggressive. Also, if the tents are set-up in a line, there is the possibility that a deer would try jumping over a tent without seeing the tents behind it, knocking them down and injuring people inside.
    - There should be no isolated tents as the majority of bear attacks involving tents happen to an isolated tent.
    - Some people have inquired about using hammocks on their trek but they are not allowed at Philmont due to damage on trees (girdling), the safety concern

of someone walking into it at night, wildlife doing damage to it, and weather concerns.
        - The only items allowed inside a tent are a sleeping bag, sleeping pad, sleep clothes, flashlight, book, eyeglasses (no contacts), rain jacket, fleece, boots, socks, camp shoes, and emergency medication such as EpiPens®, inhalers, and diabetic medication. (All emergency medication should be wrapped in a sock and placed inside the right boot.)
    - A video titled: "*How To Setup A Campsite*" can be found on Philmont's YouTube channel at: https://www.youtube.com/watch?v=BPnwAUhQjMA
    - **Begin preparing for dinner**



        - Dinner preparation should be in or near the fire ring.
        - Gather all appropriate dinners for the evening meal.
        - Set out an unused bear bag on the ground as the "kitchen countertop".
        - Emphasize that crew members should minimize the amount of walking they do near the kitchen area and the cooks should be the only people inside the kitchen area. The purpose of this is to limit the amount of dirt that is kicked into the food. Also, more movement around the kitchen increases the chance of the pot getting knocked over.
        - The cooks should be wearing closed toed shoes in case the pot with boiling water spills over.
        - The cooks should start boiling about four quarts of water depending on the meal.
        - The cooks should open all the dinner meal bags and organize the individual food packets on their kitchen countertop.
        - Bowls, spoons, and all utensils that will be used for the meal should be placed on the kitchen countertop.
        - Once the water reaches a rolling boil, all dishes must be sanitized for at least 30 seconds in order to prevent illness on the trail. (By sanitizing immediately before a meal rather than the night before, you are able to save on fuel and water by having two uses: sanitizing and rehydrating.)
        - Pour the dehydrated meal into the empty eight quart pot.
        - Turn the stove off and carefully pour the hot water into the eight quart pot with the food. Use your best judgment on how much water to add. You can always add more water later but once it is added, it cannot be easily removed.
        - Stir the food thoroughly with a large spoon to ensure all the food is getting rehydrated.
        - Place the lid on the pot and let sit for 10-12 minutes or follow the directions on the food bag.
        - Say grace.
        - Stir the food one last time and serve.

- **Eat dinner**
  - Make sure to be careful while eating: any clothing that has food spilled on it needs to be hung in the bear bags at night.
  - Encourage your crew to eat all of the food as this will make the cleanup process much easier.
  - Consolidate the trash into one empty meal bag and collect the other empty meal bags, shiny food wrappers (Terracycle), and paperboard for recycling.
- **Cleanup**
  - Once the food is all gone, use the leftover hot water (no longer boiling and now warm) to pour into the dirty food pot, now referred to as the "wash pot". Add 3-4 drops of Campsuds® biodegradable soap into the wash pot and cut a small 1.5" x 2" piece off of a scrubby pad.
  - Pour one quart of water into the pot that was used to boil the water originally. This pot is now referred to as the "rinse pot".
  - Gather all dishes and utensils used in the dinner and begin scrubbing them in the wash pot starting with the cleanest items first, rinsing them in the rinse pot, and stacking them up by the sump to dry for the night.
  - Once all the dishes are cleaned, scrub the wash pot of all the food particles and bring the wash pot, rinse pot, food strainer, scraper, and two yum-yum (Ziploc®) bags over to the sump.
- A video titled: "*How To Wash Dishes*" can be found on Philmont's YouTube Channel at: https://www.youtube.com/watch?v=eLt8XjCG7So
- **Sump**
  - Pour the wash water through the food strainer and into the sump.
  - Use the scraper to remove all food particles from the food strainer and place the food particles into one yum-yum bag.
  - Pour the rinse water into the wash pot and swirl around to rinse out any remaining soap or food.
  - Pour the rinse water out of the wash pot through the food strainer and into the sump.



- Clean away any food particles from the food strainer and sump screen by using the scraper. Place the food particles and used scrubby pad in the yum-yum bag and treat as trash by hanging them up in the oops bag at night.
- Place the food strainer and scraper into the unused yum-yum bag and also hang them up in the oops bag at night.

- **Hang oops bag**
  - Let crew members brush their teeth, remove contacts, take medication, etc.
  - Have every crew member double check their pockets, pack, and the campsite in general for any smellables. The Wilderness Pledge *Guia* should reinforce bear procedures every night on trail.
  - Pack up all trash, food, ditty bags, first aid kit, and smellable water bottles into the oops bag. Ideally, smellable water bottles should be empty so that the oops bag is not as heavy to lift.
  - In order to save space, you should clip your smellable bottles onto the oops rope, outside of the bags.
  - Tie the oops bag to the oops line, raise the bag, and tie-off to two unused trees using sticks around the trunk.
- **Campfire**
  - Make sure campfires are allowed where you are camping. Due to Philmont's arid landscape and high winds, a fire ban is common during the summer months.
  - Sticks should be no longer than your forearm and no wider around than your wrist.
  - Keep the fire small, no higher than 18".
  - Keep a pot of water nearby and never leave the campfire unattended.
  - Burn all wood to ash and pour water over the fire and stir with a stick when the fire is out to ensure the fire is "out cold". You should feel comfortable putting your hand in the ash since it is cold.
- **Breaking camp**
  - The Crew Leader should be responsible for waking the crew. A normal time to wake up is anywhere between 5:30 and 6:00am. People should pack up their personal gear first (sleeping bags, tents, etc.) then get the bear bags down and finish packing their packs.
  - Lead by the Wilderness Pledge *Guia*, make sure to "fluff your duff" by returning the appearance of your tent site to what it was before your tent was placed. To rejuvenate the grass, pine needles, etc. that was under your tent, use your hands or feet to gently rearrange the material into a position that is more natural than the imprinted rectangle left by your tent.
  - Form a line with your crew to police the area, picking up all trash and making sure no gear is left behind.
  - Pack out cold ashes from campfire ring by using an empty meal bag. Ashes should be dispersed 30 minutes outside of camp and 100 ft. off the trail.
  - Some crews prefer to eat breakfast while hiking or 30 minutes down the trail as an extra incentive to get out of camp early.

Conducting a Shakedown Hike

As mentioned earlier, crews are highly recommended to participate in at least two shakedown hikes before their Philmont trek. These shakedowns will vary from crew to crew depending on where you are from but three-day/two-night trips covering between 15-25 miles over as much elevation change as possible is recommended for a crew. On these shakedown hikes, it is possible for Scouts to receive credit towards a few merit badges with a little extra preparation. The Camping, Cooking, Hiking, and Backpacking merit badges all have requirements that can be completed through these shakedown hikes while preparing for a Philmont trek. The requirements that can be earned from the Camping merit badge are: 2, 3, 4, 5, 6, 7, 8, and 9b; from Cooking: 5, 6, and 7; from Hiking: 2, 3, 4, and count towards the hikes for 5, 6, and 7; and from Backpacking: 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10.

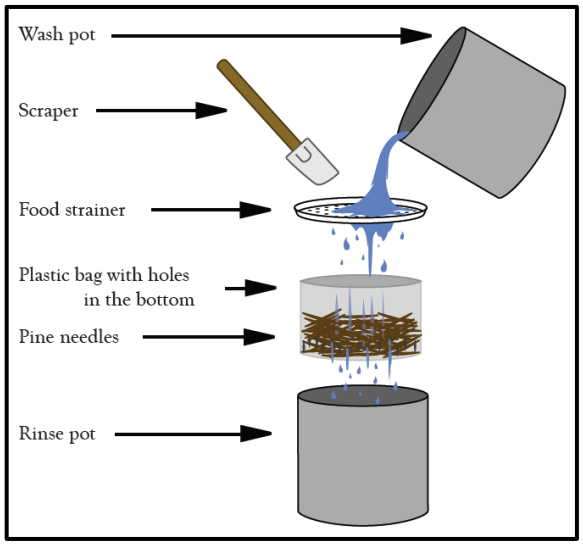
In the early stages of your crew's preparation for Philmont, it is recommended that every member of your crew signs a "crew member contract." This contract should be written by the crew and tailored to the crew's specific needs. Examples of topics used in crew member contracts are: exercise at least three times a week for no less than an hour each session, pay deposits on time, participate in two shakedown hikes, etc. It is found that crews who sign one of these contracts are usually more prepared and have a more successful trek because of it.

After the two shakedown hikes, a third crew activity of completing seven hours of conservation work is recommended to build additional comradery amongst the crew as well as get you the additional seven hours needed for the 50 Miler Award. The 50 Miler Award requires 10 hours of conservation work in addition to a 50 mile trek and your expedition at Philmont will get you three hours already. This extra time spent bonding with your crew is a great way to all get on the same page as well as get a rarely earned award out of it too.

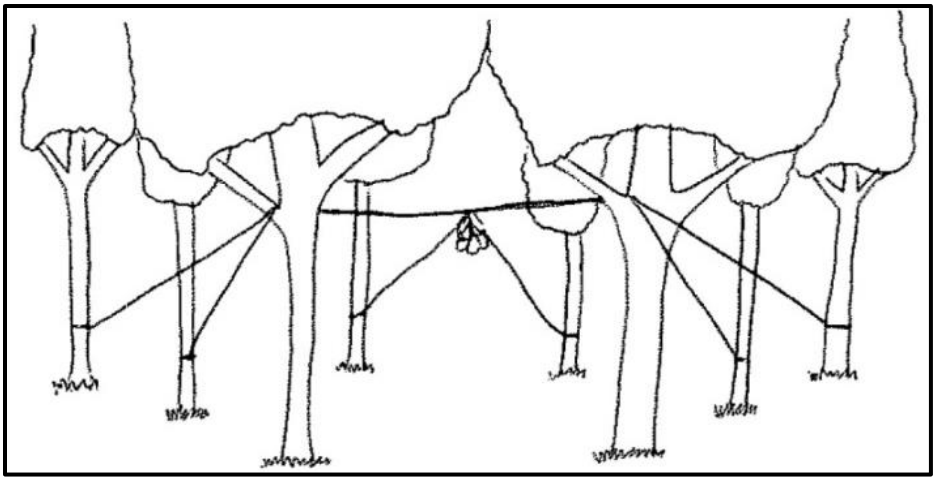
Although the campsites your crew will stay at during your shakedown hikes probably will not have sumps or bear cables, you can begin to practice Philmont's alternative low-impact method. Here are the directions for making and using low-impact sumps and bear bags:

Low-Impact Sump

- Take a gallon size Ziploc® bag (trail meal bags work great too) and poke about 20 small holes in the bottom.
- Fill ¼ of the bag with pine needles.
- Pour the rinse water into the wash pot
- Pour the water from the wash pot, through the food strainer, through the bag, and into the second pot.
- Then pour the water through the food strainer, bag, and into the other pot a second time and repeat until no more food particles drip into the pot.
- Distribute the water in a rainbow-like fashion 200 ft. from camp and water sources.
- Rinse the pots.
- Pack out the bag with pine needles as trash.



Low-Impact Bear Bags



- Requires three 100’ x ¼” bear ropes, bear bags, a carabiner, and eight trees.
- Fold a bear rope back on itself to create a double-lined 50’ rope and throw over the branch of a tree.
- Pull the rope halfway over the branch.
- Fold a second bear rope and throw over another tree branch about 20 feet away.
- Pull the second bear rope halfway over the branch.
- Connect the two bear ropes by using a weight bearing carabiner through the center loops.
- Feed the third bear rope halfway through the carabiner.
- Tie bear bags to alternating sides of the carabiner.
- Pull the first two ropes and wrap the two ends of each line to separate trees while using sticks just like with normal bear lines.
- Tie oops bags near the center loop of the third bear rope.
- Pull up the third bear rope and wrap each end around unused trees. Use sticks between the rope and the bark just like with normal bear ropes.

In the second part of the guide, we will cover more detailed Leave No Trace examples, Philmont-specific first aid, weather, hygiene, the stages of group dynamics, additional conditioning tips, and a general outline for the order of events of the arrival day at Philmont.

Refer to Philmont’s website: www.philmontscoutranch.org for updates to this guide and the most up-to-date information regarding your trek.

http://www.youtube.com/user/philmontscoutranch

Philmont Advisor Skills School & Philmont Advisor Workshop

Beginning in the fall of 2015, Philmont launched the Philmont Advisor Skills School (PASS) and Philmont Advisor Workshop (PAW) courses both at Philmont Scout Ranch in Cimarron, NM and in cities across the country. These courses are designed to better help you prepare for an upcoming trek and are taught by experienced members of Philmont’s Ranger Department. To learn more about these courses and the future courses for the fall of 2017 visit: www.philmontscoutranch.org/pass