**ED BRYANT SCOUT RESERVATION MERIT BADGE PRE-REQUISITES**

**Ecology and Conservation Merit Badge Pre-Reqs**

**Eco-Con**

Envi Sci: Level 3

Forestry: Level 3

Insect Study: Level 2

Geology: Level 3

Reptile and Amphibian Study: Level 2

Mammal Study: Level 2

Weather: Level 2

* **Insect Study**

**Requirement 10**

* + - **B.)** Study a hive of bees. Remove the combs and find the queen. Estimate the amount of brood and count the number of queen cells explain how to determine the amount of honey in the hive.
* **Reptile and Amphibian Study**

**Requirement 9A**

* + - Identify at night three kinds of toads or frogs by their voices.
			* Imitate the song of each for your counselor.
			* Stalk each with a flashlight and discover how each sings and from where.

**Requirement 8: Do one of the following**

* + - **A.)**Maintain one or more reptiles or amphibians for at least a month. Record food accepted, eating methods, changes in coloration, shedding of skins, and general habitats; or keep the eggs of an amphibian from the time of laying until their transformation into tadpoles (frogs) or larvae (salamanders). Whichever you choose, keep records of and report to your counselor how you cared for your animal/eggs/larvae make sure to include lighting, habitat, temperatures, humidity and maintenance, and any vet care requirements.
		- **B.)** Choose a reptile or amphibian you can observe at a local zoo, aquarium, or nature center, or other such exhibit (such as your classroom or school). Study the specimen you have chosen weekly for a period of three months. At each visit, sketch the specimen in its captive habitat and note any changes in its coloration, shedding of skins, and general habits and behavior. Discuss with your counselor how the animal you observed was cared for including its housing and habitat, how the lighting, temperature, and humidity were maintained, and any vet care requirements

Find out, either from the information you locate on your own or by talking to a caretaker, what this species eats, what its native habitat and home range, preferred climate, average life expectancy, and natural predators are. Also, identify any human-caused threats to its population and any laws protecting the species and its habitat. After the observation period, share what you have learned with your counselor

* **Environmental Science**

**Requirement 3: Do ONE Activity from EACH of the following categories.** (All prereqs are optional as others within the categories can be completed at summer camp)

* + - **A. Ecology**
			* **1.)**Conduct an experiment to find out how living things respond to changes in their environments. Discuss your observations with your counselor
			* **2.)** Conduct an experiment illustrating the greenhouse gas effects. Keep a journal od your data and observations. Discuss your conclusion with your counselor
		- **B. Air Pollution**
			* **1.)** Perform an experiment to test for particles that contribute to air pollution. Discuss your findings with your counselor
			* **2.)** Record the trips taken, mileage, and fuel consumption of a family car for seven days, and calculate how many miles per gallon the car gets. Determine whether any trips could have been combined (“chained”) rather than taken out and back. Using the idea of trip chaining, determine how many miles and gallons of gas could have been saved in those seven days.
		- **F. Pollution Prevention, Resouce Recovery, and Conservation**
			* **1.)** Look around your home and determine 10 ways your family can help reduce pollution. Practice at least two of these methods for seven days and discuss with your counselor what you have learned
			* **2.)**Determine 10 ways to conserve resources or use resources more efficiently in your home, at school, or at camp. Practice at least two of these methods for seven days and discuss with your counselor what you have learned.
			* **NOTE:** Number Two on this list CAN be completed on camp BUT one day needs to be completed prior to attending summer camp.
		- **G. Pollination**
			* Hive a swarm OR divide at least one colony of honey bees. Explain how a hive is constructed
* **Forestry**

**5. With your parent’s and counselor’s approval, do ONE of the following**:

* + - **A.** Visit a managed public or private forest area with the manager or a forester who is familiar with it. Write a brief report describing the type of forest, the management objectives, and the forestry techniques used to achieve the objectives.
		- **B.** With a knowledgeable individual, visit a logging operation or wood-using manufacturing plant. Write a brief report describing the following:
			* **(1)** The species and size of trees being harvested or used and the location of the harvest area or manufacturer
			* **(2)** The origin of the forest or stands of trees being utilized (e.g., planted or natural)
			* **(3)** The forest’s successional stage. What is its future?
			* **(4)** Where the trees are coming from (land ownership) or where they are going (type of mill or processing plant)
			* **(5)** The products that are made from the trees
			* **(6)** How the products are made and used
			* **(7)** How waste materials from the logging operation or manufacturing plant are disposed of or utilized
		- **C.** Take part in a forest-fire prevention campaign in cooperation with your local fire warden, state wildfire agency, forester, or counselor. Write a brief report describing the campaign, how it will help prevent wildfires, and your part in it.

**8.** Visit one or more local foresters and write a brief report about the person (or persons). Or, write about a forester’s occupation including the education, qualifications, career opportunities, and duties related to forestry.

* **Weather**

**9, B.)**Visit a National Weather Service office or talk with a local radio or television weathercaster, private meteorologist, local agricultural extension service officer, or university meteorology instructor. Find out what type of weather is most dangerous or damaging to your community. Determine how severe weather and flood warnings reach the homes in your community.

* **Geology**

**4.) Do one of the following**

* + - **A.** With your parent’s and counselor’s approval, visit with a geologist, landuse planner, or civil engineer. Discuss this professional’s work and the tools required in this line of work. Learn about a project that this person is now working on, and ask to see reports and maps created for this project. Discuss with your counselor what you have learned.

**5.) Do one of the following (a OR b OR c OR d)**

* + - **A. Surface and Sedimentary Processes Option**
			* **(4)** Conduct an experiment approved by your counselor that shows how some sedimentary material carried by water may be too small for you to see without a magnifier.
			* **(5)** Visit a nearby stream. Find clues that show the direction of water flow, even if the water is missing. Record your observations in a notebook, and sketch those clues you observe. Discuss your observations with your counselor.
		- **B. Energy Resources Option**
			* **(4)** Using at least 20 data points provided by your counselor, create a subsurface structure map and use it to explain how subsurface geology maps are used to find oil, gas, or coal resources.
			* **(5) Do ONE of the following activities:**
				+ **B.** With your parent’s and counselor’s permission and assistance, arrange for a visit to an operating drilling rig. While there, talk with a geologist and ask to see what the geologist does onsite. Ask to see cutting samples taken at the site.
		- **C. Mineral Resources Option**
			* **(5) Do ONE of the following activities:**
				+ **A.** With your parent’s and counselor’s approval, visit an active mining site, quarry, or sand and gravel pit. Tell your counselor what you learned about the resources extracted from this location and how these resources are used by society.
				+ **C.** With your parent’s and counselor’s approval, visit the office of a civil engineer and learn how geology is used in construction. Discuss what you learned with your counselor.
		- **D. Earth History Option**
			* **(6) Do ONE of the following:**
				+ **A.** Visit a science museum or the geology department of a local university that has fossils on display. With your parent’s and counselor’s approval, before you go, make an appointment with a curator or guide who can show you how the fossils are preserved and prepared for display.
				+ **B.** Visit a structure in your area that was built using fossiliferous rocks. Determine what kind of rock was used and tell your counselor the kinds of fossil evidence you found there.
* **Mammal Study**

**3. Do ONE of the following:**

* + - **A.** Spend three hours in each of two different kinds of natural habitats or at different elevations. List the different mammal species and individual members that you identified by sight or sign. Tell why all mammals do not live in the same kind of habitat.

**4. Do ONE of the following**:

* + - **A.** Under the guidance of a nature center or natural history museum, make two study skins of rats or mice. Tell the uses of study skins and mounted specimens respectively.
		- **D.** Make and bait a tracking pit. Report what mammals and other animals came to the bait.
		- **E.** Visit a natural history museum. Report on how specimens are prepared and cataloged. Explain the purposes of museums.

**Aquatics Merit Badge Pre-Reqs**

**Aquatics**

Canoeing: Level 2

Kayaking: Level 2

Motorboating: Level 2

Rowing: Level 2

Small Boat Sailing: Level 2

Swimming: Level 2

Lifesaving: Level 3

* **Canoeing**
	+ **2.** Before doing the following requirements, successfully complete the BSA swimmer test: Jump feet first into water over the head in depth. Level off and swim 75 yards in a strong manner using one or more of the following strokes: sidestroke, breaststroke, trudgen, or crawl; then swim 25 yards using an easy, resting backstroke. The 100 yards must be completed in one swim without stops and must include at least one sharp turn. After completing the swim, rest by floating.
* **Kayaking**
	+ **2.** Before doing requirements 3 through 8, successfully complete the BSA swimmer test: Jump feetfirst into water over the head in depth. Level off and swim 75 yards in a strong manner using one or more of the following strokes: sidestroke, breaststroke, trudgen, or crawl; then swim 25 yards using an easy, resting backstroke. The 100 yards must be completed in one swim without stops and must include at least one sharp turn. After completing the swim, rest by floating.
* **Motorboating**
	+ **NOTE:** Must be 16 years of age and have a valid Wisconsin boaters license.
	+ **2.** Do the following: a. Before doing requirement 5, successfully complete the BSA swimmer test.
* **Rowing**
	+ **2.** Before completing requirements 4, 5, 6, and 7, successfully complete the BSA swimmer test.
	+ **4.) Do ONE of the following**
		- **b.** Participate as a rowing team member in a competitive rowing meet. The team may be sponsored by a school, club, or Scout unit. The meet must include competition between two or more teams with different sponsors. Complete at least 10 hours of team practice prior to the meet.
	+ **5.)Do ONE of the following**
		- **b.** In a sliding-seat rowboat, come alongside a pier and, with your buddy assisting you, get out onto the pier. Help your buddy into the boat. Reverse roles with your buddy and repeat the procedure.
* **Small Boat Sailing**
	+ **2.** Before doing requirements 3 through 9, successfully complete the BSA swimmer test: Jump feetfirst into water over the head in depth. Level off and swim 75 yards in a strong manner using one or more of the following strokes: sidestroke, breaststroke, trudgen, or crawl; then swim 25 yards using an easy, resting backstroke. The 100 yards must be completed in one swim without stops and must include at least one sharp turn. After completing the swim, rest by floating.
* **Swimming**
	+ **2.** Before doing the following requirements, successfully complete the BSA swimmer test: Jump feet first into water over the head in depth. Level off and swim 75 yards in a strong manner using one or more of the following strokes: sidestroke, breaststroke, trudgen, or crawl; then swim 25 yards using an easy, resting backstroke. The 100 yards must be completed in one swim without stops and must include at least one sharp turn. After completing the swim, rest by floating.
* **Lifesaving**
	+ **2. Before doing requirements 3 through 15:**
		- **A.** Earn the Swimming merit badge.
		- **B.** Swim continuously for 400 yards using each of the following strokes in a strong manner, in good form with rhythmic breathing, for at least 50 continuous yards: front crawl, sidestroke, breaststroke, and elementary backstroke.

**SWAMP Merit Badge Pre-Reqs**

Art: Level 1

Basketry: Level 1

Indian Lore: Level 1

Metalworking: Level 2

Photography: Level 1

Woodcarving: Level 2

Leatherworking: Level 1

* **Art**
	+ **6.** With your parent’s permission and your counselor’s approval, visit a museum, art exhibit, art gallery, artists’ co-op, or artist’s workshop. Find out about the art displayed or created there. Discuss what you learn with your counselor
* **Indian Lore**
	+ **3. Do TWO of the following. Focus on a specific group or tribe.**
		- **a.** Make an item of clothing worn by members of the tribe.
		- **b.** Make and decorate three items used by the tribe, as approved by your counselor.
		- **c.** Make an authentic model of a dwelling used by an Indian tribe, group, or nation.
	+ **4. Do ONE of the following:**
		- **b**. Learn and show how a tribe traditionally cooked or prepared food. Make three food items.
	+ **5. Do ONE of the following:**
		- **b.** Sing two songs in an Indian language. Explain their meanings.
		- **g.** Learn 25 Indian place names. Tell their origins and meanings.
		- **i.** Attend a contemporary American Indian gathering. Discuss with your counselor what you learned and observed. Include in your discussion any singing, dancing, drumming, and the various men’s and women’s dance styles you saw.
* **Metalworking**
	+ Must be 14 years old and have long pants to enter the forge for this Merit Badge
* **Photography**
	+ **b.** Show your counselor your current, up-to-date Cyber Chip.
* **Woodcarving**
	+ **2. Do the following:**
		- **a.** Earn the Totin’ Chip recognition.
* **Leatherworking**
	+ **5. Do ONE of the following:**
		- **b.** Tan the skin of a small animal. Describe the safety precautions you will take and the tanning method that you used.
		- **c.** Recondition or show that you can take proper care of your shoes, a baseball glove, a saddle, furniture, or other articles of leather. Discuss with your counselor the advantages or disadvantages of leather vs. synthetic materials.
		- **d.** Visit a leather-related business. This could be a leathercraft supply company, a tannery, a leather goods or shoe factory, or a saddle shop. Report on your visit to your counselor

**Scoutcraft/Silver Circle Merit Badge Pre-Reqs**

**Scoutcraft and Silver Circle**

Orienteering: Level 2

Pioneering: Level 2

Sports: Level 2

Wilderness Survival: Level 2

Camping: Level 2

Cooking: Level 2

Citizenship in the Nation: Level 2

E-prep: Level 2

Family life: Level 2

First Aid: Level 2

* **Cooking Merit Badge**
	+ **4.** Cooking at home. Using the MyPlate food guide or the current USDA nutrition model, plan menus for three full days of meals plus one dessert. Your menus should include enough to feed yourself and at least one adult, keeping in mind any special needs and how you keep your foods safe and free from cross-contamination. List the equipment and utensils needed to prepare and serve these meals.
		- This includes finding recipes, making a shopping list and budget, preparing and serving these meals to yourself and at least one adult, using 5 of the 10 cooking methods, and getting an evaluation for each meal from someone you served it to.
	+ **5.** Camp Cooking: While I intend to offer two opportunities to cook per week, it is required to cook three meals, so one of these should be done in advance, afterward, or with their troop in their own campsite.
	+ **6.** Trail and backpacking meals. Using the MyPlate food guide or the current USDA nutrition model, plan a meal for trail hiking or backpacking that includes one breakfast, one lunch, one dinner, and one snack. These meals must consider weight, not require refrigeration and are to be consumed by three to five people (including you). List the equipment and utensils needed to prepare and serve these meals.
		- This includes finding recipes, making a shopping list and budget, preparing and serving these meals to yourself and at least one adult, at least one meal must be prepared with a fire or backpacking stove, discussing the importance of dividing food and cooking supplies while backpacking, and getting an evaluation for each meal from someone you served it to.
* **Citizenship in the Nation Merit Badge**
	+ **5.** Watch the national evening news for five days in a row or read the main stories in a national media organization (e.g., a newspaper or news website) for five days in a row.
		- Discuss the national issues that you learned about with your counselor. Choose one issue and explain how it affects you, your family, and your community.
	+ **7a OR 7b OR 7c:**
		- **(a)** Visit a place that is listed as a National Historic Landmark or that is on the National Register of Historic Places. Tell your counselor what you learned about the landmark or site and what you found interesting about it

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* + - **(b)** Tour your state capitol building or the U.S. Capitol. Tell your counselor what you learned about the capital, its function, and its history.
		- **(c)** Tour a federal facility. Explain to your counselor what you saw there and what you learned about its function in the local community and how it serves this nation.
* **Communication Merit Badge**
	+ **4.** (Conduct an interview-can be done at camp, however if a scout wishes to interview someone not involved in scouting or there with them, they must do so in advance.)
	+ **5.** Attend a public meeting (city council, school board, debate) approved by your counselor where several points of view are given on a single issue. Practice active listening skills and take careful notes of each point of view. Prepare an objective report that includes all points of view that were expressed, and share this with your counselor.
	+ **7. Do ONE of the following:**
		- **(a)** Write to the editor of a magazine or your local newspaper to express your opinion or share information on any subject you choose. Send your message by fax, email, or regular mail.
		- **(b)** Create a web page or blog of special interest to you (for instance, your troop or crew, a hobby, or a sport). Include at least three articles or entries and one photograph or illustration, and one link to some other web page or blog that would be helpful to someone who visits the web page or blog you have created. It is not necessary to post your web page or blog to the Internet, but if you decide to do so, you must first share it with your parents and counselor and get their permission.
		- **(c)** Use desktop publishing to produce a newsletter, brochure, flier, or other printed material for your troop or crew, class at school, or other group. Include at least one article and one photograph or illustration.
* **Camping Merit Badge**
	+ **8c.** While camping in the outdoors, cook at least one breakfast, one lunch, and one dinner for your patrol from the meals you have planned for requirement 8c. At least one of those meals must be a trail meal requiring the use of a lightweight stove.
	+ **9.** Show experience in camping by doing the following:
		- **(a)** Camp a total of at least 20 nights at designated Scouting activities or events. One long-term camping experience of up to six consecutive nights may be applied toward this requirement. Sleep each night under the sky or in a tent you have pitched. If the camp provides a tent that has already been pitched, you need not pitch your own tent.
		- **(b)** On any of these camping experiences, you must do TWO of the following, only with proper preparation and under qualified supervision.
			* **(1)** Hike up a mountain, gaining at least 1,000 vertical feet.
			* **(2)** Backpack, snowshoe, or cross-country ski for at least 4 miles.
			* **(3)** Take a bike trip of at least 15 miles or at least four hours.
			* **(4)** Take a nonmotorized trip on the water of at least four hours or 5 miles.
			* **(5)** Plan and carry out an overnight snow camping experience.
			* **(6)** Rappel down a rappel route of 30 feet or more.
		- **(c)** Perform a conservation project approved by the landowner or land managing agency. This can be done alone or with others.
* **Emergency Preparedness**
	+ **2c.** Meet with and teach your family how to get or build a kit, make a plan, and be informed for the situations on the chart you created for requirement 2b. Complete a family plan. Then meet with your counselor and report on your family meeting, discuss their responses, and share your family plan.
	+ **7a** Take part in an emergency service project, either a real one or a practice drill, with a Scouting unit or a community agency.
* **First Aid Merit Badge**
	+ **5. Do the following**:
		- **b.** With an adult leader, inspect your troop’s first-aid kit. Evaluate it for completeness. Report your findings to your counselor and Scout leader.
* **Family Life Merit Badge**
	+ **3.** Prepare a list of your regular home duties or chores (at least five) and do them for 90 days. Keep a record of how often you do each of them. Discuss with your counselor the effect your chores had on your family.
	+ **4.** With the approval of your parents or guardians and your merit badge counselor,decide on and carry out a project that you would do around the home that would benefit your family. Submit a report to your merit badge counselor outlining how the project benefited your family.
	+ **5.** Plan and carry out a project that involves the participation of your family.

 After completing the project, discuss the following with your merit badge counselor:

* + - **(a)** The objective or goal of the project
		- **(b)** How individual members of your family participated
		- **(c)** The results of the project
	+ **6. Do the following:**
		- **(a)** Discuss with your merit badge counselor how to plan and carry out a family meeting.
		- **(b)** After this discussion, plan and carry out a family meeting to include the following subjects:
			* **(1)** Avoiding substance abuse, including tobacco, alcohol, and drugs, all of which negatively affect your health and well-being
			* **(2)** Understanding the growing-up process and how the body changes, and making responsible decisions dealing with sex\*
			* **(3)** How your chores in requirement 3 contributed to your role in the family
			* **(4)** Personal and family finances
			* **(5)** A crisis situation within your family
			* **(6)** The effect of technology on your family
			* **(7)** Good etiquette and manners
* **Sports Merit Badge**
	+ **5.** Take part for one season (or four months) as a competitive individual or as a member of an organized team in TWO of the following sports: baseball, basketball, bowling, cross-country, field hockey, football, golf, gymnastics, ice hockey, lacrosse, soccer, softball, swimming, table tennis, tennis, track and field, volleyball, water polo, wrestling. Your counselor may approve in advance other recognized sports, but not any sport that is restricted and not authorized by the Boy Scouts of America. Then with your chosen sports do the following:

**STEM Merit Badge Pre-Reqs**

 **STEM**

Chemistry: Level 2

Chess: Level 2

Digital Technology: Level 2

Game Design: Level 2

Model Design and Building: Level 2

Moviemaking: Level 1

Space Exploration: Level 2

* **Chemistry**
	+ **7. Do ONE of the following activities:**
		- **(a)** Visit a laboratory and talk to a chemist. Ask what that chemist does and what training and education are needed to work as a chemist.
		- **(c)** Visit an industrial plant that makes chemical products or uses chemical processes and describe the processes used. What, if any, by-products are produced and how are they handled?
		- **(d)** Visit a county farm agency or similar governmental agency and learn how chemistry is used to meet the needs of agriculture in your county
* **Digital Technology**
	+ **1.** Show your counselor your current, up-to-date Cyber Chip.
* **Moviemaking**
	+ **3. Do ONE of the following:**
		- **a.** With your parent’s permission and your counselor’s approval, visit a film set or television production studio and watch how production work is done.

**Yellow River Adventure Base/Cope and Climbing**

**YRAB**

 Climbing: Level 2

 Cycling: Level 2

 Fishing: Level 2

* **Cycling**
	+ **Option A: Road Biking**
		- **(b)** Avoiding main highways, take two rides of 10 miles each, two rides of 15 miles each, and two rides of 25 miles each. You must make a report of the rides taken. List dates for the routes traveled, and interesting things seen on the ride.
		- **(c)** After completing requirement b for the road biking option, do ONE of the following:
			* **(1)** Lay out on a road map a 50-mile trip. Stay away from main highways. Using your map, make this ride in eight hours or less.
			* **(2)** Participate in an organized bike tour of at least 50 miles. Make this ride in eight hours or less. Afterward, use the tour’s cue sheet to make a map of the ride. \*The bicycle used for fulfilling these requirements must have all required safety features and must be registered as required by your local traffic laws.
	+ **Option B: Mountain Biking**
		- **(a)** Demonstrate the following mountain bike handling skills to your counselor:
			* **(1)** Neutral position, ready position, bike body separation (side to side, and forward and back), and body positioning for cornering.
			* **(2)** Show shifting skills as applicable to climbs and obstacles.
			* **(3)** Show proper technique for riding up (seated, crouched, and standing) and down hills.
		- **(b)** Take a trail ride with your counselor and demonstrate the following:
			* **(1)** Show proper trail etiquette to hikers and other cyclists, including when to yield the right-of-way.
			* **(2)** Demonstrate how to correctly cross an obstacle by either going over the obstacle on your bike or dismounting your bike and crossing over or around the obstacle.
			* **(3)** Cross rocks, gravel, and roots properly
		- **(c)** Describe the rules of trail riding, including how to know when a trail is unsuitable for riding.
		- **(d)** On trails approved by your counselor, take two rides of 2 miles each, two rides of 5 miles each, and two rides of 8 miles each. You must make a report of the rides taken. List dates for the routes traveled, and interesting things seen.
	+ **(e)** After fulfilling the previous requirement, lay out on a trail map a 22-mile trip. You may include multiple trail systems, if needed. Stay away from main highways. Using your map, make this ride in six hours.
* **Fishing**
	+ **10. If regulations and health concerns permit,** clean and cook a fish you have caught. If you are unable to catch a fish for eating, acquire a fish, clean the fish you acquired, and cook the fish you acquired. (It is not required that you eat the fish.)