



Valle de Oro Patch Requirements

Leaders: The requirements here are designed vaguely enough that girls of differing age groups can participate in all of them. Use your discretion for the troop level you have in the difficulty of each activity

All girls must complete starred activities (1-3).

- Daisies 1 additional activity
- Brownies 2 additional activities, including 1 Connectivity
- Juniors 3 additional activities, including 1 Connectivity, and 1 Wildlife
- Cadettes 4 additional activities, including 1 Connectivity, 1 Wildlife, and 1 Service Project
- Seniors/
Ambassadors 5 additional activities, including 1 Connectivity, 1 Wildlife, and 1 Service Project

National Wildlife Refuge

- 1.* *Go to Valle de Oro.* What is the history of Valle de Oro National Wildlife Refuge? What makes it special and why is it important? Describe and try to identify some of the plants and animals you see during your trip. (*Valle de Oro: National Wildlife Refuge, Valle de Oro FAQ* http://www.fws.gov/refuge/Valle_de_Oro/, <https://www.facebook.com/ValleDeOroNationalWildlifeRefuge>)
- 2.* *Learn about US Fish and Wildlife Service.* What role does US Fish and Wildlife play? What are the components of the department (National Wildlife Refuge System, Division of Migratory Bird Management, Federal Duck Stamp, Endangered Species program, etc.)? What is the National Wildlife Refuge system? How does Valle de Oro fit into this? What might employees of USFWS do? (*National Wildlife Refuge System: Overview, Pamphlets: Conserving the Nature of America, Careers*, <http://www.fws.gov/>)
- 3.* *What is my refuge?* Valle de Oro's mission is to connect people to the land. After visiting Valle de Oro, draw or write how you would imagine Valle de Oro as a National Wildlife Refuge. Valle de Oro is invested in community partnership, particularly in its early stages. Remember to email or post your ideas to the FaceBook page!

Connectivity

4. *River of Change.* How has the Rio Grande changed over the years? How have humans influenced these changes? What does the future of the Rio Grande look like? How is Valle de Oro part of the Rio Grande system? (*The River of Change*)
5. *Ecosystem of the Bosque.* What different animals and plants are trademarks of the Rio Grande bosque? How do different plants and animals interact? Make up an activity in which each girl learns about one animal or plant and interacts with the group as that animal or plant; share what you learned and fun facts on your choice. (*Fauna of the Floodplain*)
6. *Hydrology.* Water in the environment is very connected. Valle de Oro is along the Rio Grande watershed. How is water connected in an environment, and how does that affect how we interact with it? What does that mean for somewhere like Valle de Oro? (*Hydrology, Stormwater Science*)
7. *Citizen Science.* What is citizen science? How does it help scientists, government agencies, and the community? What local (BEMP) or national (Great Backyard Bird Count, eBird, Nature's Notebook, etc.) citizen science projects exist, and how can people participate? (<http://www.bosqueschool.org/bemp.aspx>)
8. *Careers.* What jobs are available through the US Fish & Wildlife Service? What about jobs within the National Wildlife Refuge System? What are the requirements for these positions, and what do the daily lives of these jobs look like? Talk to a member of the US Fish & Wildlife and ask questions about their career. (*Pamphlets: Careers*, <http://www.fws.gov/>)
9. *Duck Stamp.* Participate in the Federal Junior Duck Stamp Program and Contest. What is a Duck Stamp and why are they important? **Note that participation in the Duck Stamp art contest will count as two activities due to the time input involved.**

Wildlife

10. *Flora.* What plants are native or introduced in the Rio Grande bosque? Which ones might you find at Valle de Oro? Make a picture, poster, slideshow, or other presentation of what the plantlife at Valle de Oro looks like now, and how it might look in the future (over different seasons, over different decades, etc.)

11. *Arthropods.* What are arthropods? What role do they play in a bosque ecosystem? How do scientists study arthropods? What arthropods would you like to see at Valle de Oro? (*Creepy Crawly Critters*)
12. *Mammals.* What is a mammal? How do mammals differ from other wildlife, and how does that change when you might see them at Valle de Oro? What mammals are common at Valle de Oro? Brainstorm how do they adapt to their lifestyle (e.g., claws for subterranean diggers, long legs for terrestrial runners, wings for flyers).
13. *Herpetiles.* What are herpetiles? (Reptiles and amphibians). What makes this group a group? What are some trademark New Mexican herps, and which ones are you likely to see at Valle de Oro? Decide how changes at Valle de Oro from farming to bosque and wetlands might affect which herps are common there.
14. *Fish.* What fish are common or well-known along with Middle Rio Grande? What do these fish need to survive? Are there endangered species in New Mexico? How do New Mexico and Albuquerque water policies affect fish in the Rio Grande, and what can we do to help fish survive long-term drought common in New Mexico?
15. *Birds.* Look at a field guide and learn how to use a pair of binoculars. At a backyard, a park, along the river, at Valle de Oro or somewhere else of your choice look at birds and identify them. Decide which ones might be at Valle de Oro. What do these birds eat and where do they spend most of their time? (*Pamphlets: For the Birds*)

Service Projects

16. *Service at Valle de Oro.* Do a service project at Valle de Oro. This may be a project coordinated specifically for your troop or at an event where volunteer help is sought.
17. *Service Elsewhere.* Do a service project at another site throughout the state – another NWR, or at a state or local protected area along the Rio Grande or another wetland. Compare the mission of this area to that of Valle de Oro, and also discuss how the area is different visually or biologically.
18. *Help a Troop.* Help a younger troop do a part of this patch. Make sure to ask the girls for feedback on what they learned and how the section went!
19. *Citizen Science Service.* Help with a citizen science project at Valle de Oro. Valle de Oro now has a BEMP site, and can also be used as a location on eBird or the Great Backyard Bird Count, or look into other projects.

Patches may be purchased at La Tienda with a completed Patch Form.

What was your favorite part of the patch?

What did you learn from this patch?

What about this patch could have been better?

Leaders: How do you feel your girls benefited from this experience? How did your girls respond to this patch program? What do you think could have been done better? Please feel free to list any and all quantitative or qualitative responses from your troop.

A binder of additional resources has been made available at the Council Library. These resources are preliminary ways to help you and your troop, but should only be considered a starting point. These include some activity sheets generously provided by the Bosque Ecosystem Monitoring Program (BEMP). Resources that match up with certain activities have been noted in those activities as such: ([Valle de Oro FAQ](#))

*Please feel free to forward scans, copies or photographs of brainstorm, posters, or other material made by Girl Scouts to Valle de Oro's refuge manager: **Jennifer Owen-White**, (c) 505-933-2708, jennifer_owenwhite@fws.gov*