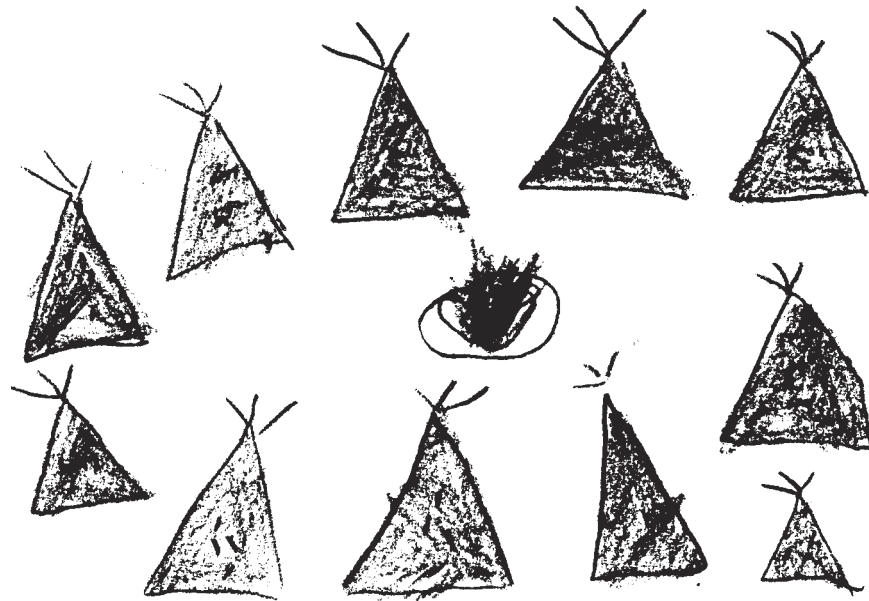


Track 5 Humans and Glacier National Park



Katie Roling

Directions and Background

This track can be done without the Activity Kit. It is designed for groups that have reviewed parts or all of the other tracks and are interested in learning about the impact humans have had on the park. The Park Visit Activities for this track consist of naturalist walks in the vicinity of St. Mary and Apgar. These activities will focus on past, present, and future human impact on Glacier National Park.

Humans and Glacier National Park is actually a summation of the theme behind *Work House*. All of the tracks in this program are concerned with succession. Mountains and Mountain Building traced a continuous cycle that takes place over millions of years. Glaciers and Glaciation followed another continuous cycle that takes place over thousands and millions of years. Following each major glacial recession, plant life reestablished a tentative foothold in the region. Following the recession of the last major ice advance, approximately 12,000 years ago, a variety of plant communities established habitat for a myriad of animals. These plant and animal communities have coexisted continuously since the end of the Ice Age.

Animals and Habitat was concerned with more immediate succession dynamics. It examined cycles that have occurred over and over again throughout the history of life on Earth. Species of plants and animals evolve on the Earth. They interact with other plants and animals and with the Earth itself. They have constructive and destructive impacts upon each other. The Earth, like a living organism, constantly changes and some species of plants and animals disappear with those changes. Plants and animals react to climate or topography and impact each other. In some rare cases a species on the verge of extinction has survived until people have made an effort to save it. Cases like the beaver are rare.

Beavers made a comeback because trapping pressure ended and their value in the ecosystem was recognized by people. Like beavers, humans are animals, but there is something different about our species. Beavers are able to engineer the environment for their own needs and for the good of many other species. Beavers don't have conventions to discuss the impact of their work upon the environment. We reflect on the environment. We can anticipate the results of our actions. We usually consider the impact and then act. We don't always make the most responsible decisions. After all, we are a relatively new and inexperienced species. We are bound to make mistakes, but we should be able to learn from those mistakes.

We are the only species that is introspective. We can actively plan the future. We don't just prepare for winter because instincts tell us we will die if we don't. Humans also engineer the Earth to suit our needs rather than finding or adapting to an environment.



We also make decisions for other species. This has never happened before. Maybe we can survive as a species and conscientiously strive to heal the Earth.

American Indians with limited technology were traditionally respectful stewards of the Earth. They lived according to *The Way*. They were aware that there were some special features about humans that distinguished them from other animals, but they never regarded themselves as separate from the plants, animals, or even the seemingly inanimate objects that together make up the Earth. They saw themselves as part of a Sacred Circle within which all things were interdependent and interconnected. To treat any object within that circle with disrespect or disregard was sacrilegious. One automatically considered the consequences of one's actions upon the environment.

Things were not perfect. Life was sometimes hard. Nature didn't always seem kind and people fought. But there was generally a sense that things were under control. If everyone did their job and looked out for their neighbors, everyone would get by. If everyone paid their respects to Creator Sun, Mother Earth, and the animal spirits, everyone would get enough to eat and there would be time to play. If everyone gave a little back to the Earth and left some for seed, the Earth would keep on giving.

With the coming of the white people, things began to change. New ideas and new technologies crept into the culture faster than Indian people could process them. Some of the new culture seemed good and helpful. But as quickly as the new ways were introduced, the habitat in which to apply them disappeared. The tribes knew about hunting territories and using the gifts of nature, but the idea that someone could own the land seemed absurd. People could no more own the land than the land could own them. They were part of the land. They came and went as hunting and gathering cycles demanded. Now they were forced onto reservations. Some times the boundaries were actually marked with fences.

The tribes were told to stay on those reservations and make a living there. How could they make a living without buffalo and other game animals and no access to the areas in which their staple plants grew. Some were given plows and cows and told to become farmers, but they could not cut their mother, the Earth, with a plow blade. Many felt that you might as well ask a wolf to be an eagle as ask an Indian to be a farmer. To make matters more difficult, most of the territory they were told to live on wasn't good farmland. Some tried to be farmers; they had to feed their children. Many of their spirits were broken. Some succumbed to acculturation, but many kept the old ways in their hearts.



When the Blackfeet sold the mountainous western part of their reservation to the U. S. Government in 1895, they did so to feed their people. They didn't see how the mountains could be of value to the United States. There was little consolation to be derived from retaining hunting, fishing, and logging rights within the area. Even those rights would be altered in the future. When signing the agreement Chief White Calf said "*Chief Mountain is my head. Now my head is cut off. The mountains have been my last refuge. We have been driven here and now are settled. I shake hands with you because we have come to an agreement, but if you come for any more land we will have to send you away.*"

The establishment of Glacier National Park in 1910 saved the land from the development that was the fate of many other lands that were taken from Native Americans. The newly formed Glacier National Park was put into the hands of people who would do the best they could to preserve the land with the same spirit and respect that the Blackfeet had for so long.

Like the Salish, Kalispel, Ktunaxa, and Blackfeet, it is the desire of the National Park Service to promote the healing and preservation values that Indians have always fostered for the area that is Glacier National Park. Perhaps with the help of the tribes on both sides of the park, suitable habitat for endangered species will be preserved.

There is little doubt that local tribes respected the park area just as they did all of their homeland. There is now ample archaeological evidence to support the oral traditions that the local tribes and bands made extensive use of the area that is now Glacier National Park. Certainly there were even winters when large groups camped within the immediate mountain valleys. Naturally the Native People left little conspicuous evidence; Indians made a point of treading lightly wherever they lived and traveled.

The Glacier area was, and still is, a sacred and awe-inspiring place. Tribal members came here on vision quests. Vision quest cribs (low rock walls ritually arranged for protection) can be found near the peaks of more than thirty mountains in the immediate vicinity of Glacier National Park. They came for ceremonials and reunions. They came during favorable weather to hunt animals and plants that were unavailable in the western valleys and on the eastern prairies. They passed through on their way from one side of the mountains to the other. They came to escape the sometimes oppressive heat of the summer prairies. The Glacier area was a pleasant oasis in summer and there was plenty to do in terms of hunting and gathering during their stays.

The Indians didn't make roads to get from one side of the mountains to the other; they used game trails. People didn't pass over the trails on a daily basis. Small and large bands used some of the trails several times a year.



In the lower elevations of the park, archaeologists have located many temporary campsites that predate the European immigration. There is little there for the public to see and access to them would destroy the remains of the sites. The local tribes know of many sites within the park that their ancestors used and that are still used. They keep these sites a secret. The passage of time has helped to conceal, preserve and sometimes destroy other remnants of Native culture. The last known remnants of Kootenai war lodges in the St. Mary area were flooded out by Wild Creek in 1975.

Blackfeet, Salish, and Kootenai used the area, but in most cases they left only footprints long erased. That is the ideal which the National Park Service wishes to inspire. When you visit the park you will see the impact that humans have had since the coming of the white people. Some of that impact was unavoidable if we were to make Glacier National Park accessible to visitors. The impact that you see most readily is in the form of roads, trails, campsites, and buildings.

There is actually less visible impact on Glacier National Park now than fifty years ago. It is Park policy not to expand the developed areas within park boundaries. If a facility is updated, new construction must be done in existing developed areas. In fact, there are fewer roads and maintained trails in the park now than there were fifty years ago. Most of the park, over one million acres, is managed as wilderness.



Classroom Activities

Classroom Activity 1 Stewards of the Land

Objective:

Students will use their language arts and science knowledge to write a contemporary cultural “How Story” dealing with relevant environmental issues that effect their lives.

Background:

This writing activity is designed as a follow up exercise after participating in a part or all of this program. Students are asked to consider their part in the healing and preservation of the Earth and particularly their surrounding ecosystem. They will be asked to demonstrate their understanding of what has gone on in the past with regard to their environment, how the present reflects the impact of the past, and what can be done to insure the best possible future for the Earth and all its creatures. These ideas will be developed in the form of a contemporary Cultural Tradition Story. Cultural Tradition Stories attempt to preserve culture, instruct, explain natural phenomenon, model appropriate behavior, and entertain.

Materials:

Theme paper
Art Paper
Pencils
Colored Pencils

Procedure:

1. Review the background information on How Stories that was provided for Activity 1 in the Mountains and Mountain Building Track.
2. Have students write a story that deals with the environment and teaches a lesson about caring for the Earth in contemporary times. An interesting approach would be to use Bluejay, Coyote, Napi, Creator Sun, or any other cultural hero, as they might behave and feel about the Earth in modern times. Also encourage students to create their own characters. (An example story is provided below).
3. Ask the students to illustrate their stories with art work.
4. When the stories are finished, encourage the students to read them to the rest of the class or let you read them to the class. Encourage the students to explain and discuss the issues behind their stories.

Follow Up:

Students usually enjoy having their stories and pictures collected and bound into a class book. It gives them a real feeling of being published and of being a part of a group effort.



Lucy Lone Walker

(Example contemporary “How Story”)

As near as she could tell, Lucy Lone Walker was almost 90 years old. She hadn't always thought of life in terms of years. She seemed to remember her father talking about the days before the white men came and took the land away. Her father had enjoyed hunting in the area that was now the park. After the tourists began to come by the hundreds on the train, he never went back in again. But they kept the cabin on the ridge overlooking the park. Even when she was very young, she remembered, her father would take her small hand in his big hand and walk along the ridge, looking down onto the string of beaver dams on the one side, and off into the park on the other side. Every now and then he would stop, lift her in his arms and gaze off toward the mountains. He would sigh a deep sigh occasionally, but he never said much.

Her father had been gone for many years now. Even one of her own children had passed on, but she didn't feel particularly old. She had seldom missed her evening walk along the ridge. She was sure that the walking had kept her young.

Lucy seldom looked up into the park. She had always enjoyed watching the beavers at their work among the ponds. Lucy had been so familiar with some of the beavers in the past that she had given them names. She even spoke to them at times. The beavers looked at her and were always aware when she was watching, but she never got the feeling that they cared to interact with her. At least they had grown to trust her. They seldom dove or even sounded an alarm when she came around, but they were much more skittish on the few occasions that she was joined in her walk by her daughter or her grandchildren. Lucy sometimes felt that the beavers were more a part of her life than even her children and grandchildren were.

It had almost killed her that evening twelve summers ago when she stood over the dam and saw the scattered limbs and mud, and saw what was left of the lodge standing nakedly above the silty bottom of the



pond. When she had heard the dynamite in the morning she had been a bit upset, but she attributed it to road work in the park. It was several days before she learned that it was the Looks Back boy who had blown up all the dams in the string just to gather a few pelts worth less than thirty dollars each.

When she had gone to the boy's mother, the woman had told Lucy that she was sorry that the beavers had been so important to her, but it was really hard to raise boys these days. The son had told her that he needed to learn to hunt if he was going to be a provider and a warrior.

"No warrior ever used dynamite to catch a defenseless animal!" retorted Lucy. She hadn't regretted making such a scene. She had never gotten used to the sight of the dried-up ponds. The trees and vegetation along the creek had clearly thinned out over the years. The birds had been gone since just after the dams went. Lucy hadn't even seen a brook trout in the creek in the last three years. They used to pop the surface like rain in the years before the dynamite.

Then one evening Lucy's heart jumped into her throat. There beneath her were two beavers and the creek was beginning to back up over the old pond bottom. Lucy had never dreamed that beavers would return to the drainage. She got so excited she was afraid she'd have a stroke.

Then the thought struck her, "It won't be long and there will be another generation of young warriors nosing around here. What can I do. I couldn't bear to see it happen again." She hoped against hope that nobody would come along and see the new dam and the newly gnawed tree stumps.

The next evening and every evening after that Lucy carried a small paintbrush with her. Along the edges of the pond she rubbed the newly gnawed tree stumps with grass and painted them with mud. She scattered the chips among the deeper grass and heavy brush. The stumps actually looked like they had been there for years. She would just have to hope that no one would notice that the pond had ever drained.



One evening as Lucy bent over her work near the pond, a deep voiced chuckle sounded immediately behind her; "What are you doing Little Grandmother?"

"You nearly killed me Young Man. Can't you cough or something? Don't you know better than to sneak up on an old person like that?"

The young man held a young girl in his arms. The child looked down when the old woman turned to her. The young man chuckled again, "I'm sorry Grandmother. I thought you heard us coming through the grass. "

"But who are you? I've never seen you here before. "

"But you have; a long time ago. I am called Charlie; Charlie Looks Back. Years ago I killed your beavers. I could never tell you how badly I felt. I brought this pair back from the Fish and Game in Missoula. They've got extra on Lolo Creek. I wanted my daughter to see you and them. "

On the way back to the cabin that evening Lucy gazed off into the park and sighed; "I guess I'll probably be able to walk around up here for another 90 years now".



Park Visit Activities

Park Visit 1

Footprints on the Land

St. Mary

Objective:

Students will recognize the impacts of people on Glacier National Park and St. Mary and discuss ways to preserve the area for future generations.

Background:

The naturalist will take the group on a walk to examine the impact people have had on the land around St. Mary. The focus of the walk will be on past, present, and future uses of the land in and around Glacier National Park.

As soon as you cross Divide Creek near the park entrance, you will be on the Divide Creek floodplain. Serious flooding of Divide Creek occurred in 1964, 1975, and 1991. In order to minimize structural damage to park and private facilities a plan was implemented to intervene with heavy equipment.

Red Eagle Valley runs to the southeast of Upper St. Mary Lake. Until 1975, a well-developed fire road was maintained for about four miles into the park. In October of that year, the road was permanently closed. Access was blocked off and the road bed has been allowed to deteriorate naturally. The previous road is now little more than a hiking trail. A tributary of Divide Creek is currently attempting to reestablish its old route along the roadbed and down to the lake. The National Park Service is trying to accommodate the creek with culverts and other adjustments while maintaining existing access to the area. About two miles up the trail, the road forks along an old bed that once connected Red Eagle Road with Highway 89 at a point just below the Hudson Bay Divide. This old road has been abandoned for many more years and, because it is not a regular hiking route, the trail has nearly disappeared.

Within easy walking distance of the St. Mary Visitor Center, along the former Red Eagle Road, you can visit the 1913 Ranger Station which has been restored and preserved as a reminder of the early days in Glacier National Park.

On the edge of St. Mary Lake, further up the road, are the almost invisible remnants of docks that once serviced lake tour boats. As you continue up the trail, it takes a sharp eye to locate the St. Mary Chalet building sites. Below the old roadbed and about two hundred yards beyond the old docks, you can find the area where the ground was leveled for the foundations of the buildings. Along the shore of the lake, occasional artifacts emerge from the sloughing soil. After World War II the old chalet buildings were pushed out onto the ice in winter and burned. Any ruins are at least eighty feet below the surface of the lake. An old road once connected St. Mary Campground with the road just above the KOA Campground on Lower St. Mary Lake. That road has been abandoned and the bed is nearly invisible now. The maintenance and housing area for the Hudson Bay District Headquarters once



contained a fairly well established village with a mixture of private and Park Service structures. There are even some old gravesites here.

After Glacier National Park was established in 1910, the Park Service cleaned up the old townsite and erected maintenance buildings and facilities. Although structures like sewage treatment plants are not a particularly attractive sight in a National Park, they are necessary to prevent ground and water pollution that would occur without them. The National Park Service also maintains a plant nursery at Park Headquarters where native plants are grown for revegetating construction and visitor-impacted sites.

A recurring problem is the deliberate or inadvertent introduction of exotic species into the park. An example is spotted knapweed, an exotic plant that has spread across Montana and into Glacier National Park. Chemicals secreted from knapweed roots prevent native plants from growing nearby. Eventually knapweed spreads and dominates a field or roadside. The Park Service has expended a great deal of time and money in an effort to control this invader.

Preserving the natural integrity of Glacier National Park is not easy nor is deciding management policies.



Park Visit Activity 2

Letting It Take Its Natural Course

St. Mary

Objective:

Students will analyze a complex park management situation, discuss the situation, come to a consensus, and make a decision on the action to be taken. Students will become familiar with a decision-making process that is used by land managers.

Background:

To illustrate how complicated preservation and restoration decisions can be, the naturalist will recount the history of Divide Creek and invite the students to role play the decision making process involved in dealing with the creek at flood stage.

It is mid-June and there is still a great deal of snow in the mountains. The temperature is in the high 70's, and it has been raining steadily for the last 48 hours. The forecast is for continued rain during the next 48 hours and Divide Creek is nearing flood level. Several large logs have already lodged themselves against the Divide Creek bridge.

The official policy of Glacier National Park is to let nature take its course as much as possible. Divide Creek marks the Glacier National Park border and the Army Corps of Engineers monitors and controls activities that may effect the natural flow of the creek. Generally the Corps does not allow interference with waterways without due process and special permits. During past floods, substantial damage has been done to park maintenance facilities, private property to the immediate east of Divide Creek, and to homes and businesses down stream from St. Mary. In 1964 several local people were killed while trying to save private property in the immediate area.

There are several options available that may reduce damage to park and private facilities. The bridge (a National Historic Structure) might be blown up to prevent water backup due to log jams. The creek could be diverted into the St. Mary River by bulldozing across the meadow and through the road. Everyone could sandbag and hope that the bags will protect people and property. Or all parties could get away from the area until the water level subsides and hope that there is no major damage done. History has indicated that there will probably be damage.

Procedure:

1. Assign groups of students to represent various parties affected by the outcome of the situation: the National Park Service, the Army Corps of Engineers, private owners of the lodge, the people living downstream, the heavy equipment operators who might be called upon to do hazardous duty, and a conservation group who feel that natural waterways should not be tampered with for any reason.



2. Give the students a few minutes to prepare their arguments and then call them back together to discuss the issue and come to a decision. Someone other than the naturalist or the teacher should serve as chairperson and several people should be appointed as a jury to decide upon the best solution after arguments have been presented.
3. Upon completion of the discussion process, the naturalist can explain to the group what actually took place in the summer of 1991.



Park Visit Activity 3

Footprints On the Land

Apgar

Objective:

Students will recognize the impacts of people on Glacier National Park and the Lake McDonald region and discuss ways to preserve the area for future generations.

Background:

The naturalist will take the group on a walk to examine human impacts on the land around Apgar. The focus will be on past, present, and future uses of the Park.

White Americans had been living, developing, and even logging in the Apgar area before Glacier National Park was established in 1910. There were and still are many privately-owned cabins along the lake and in the vicinity of Lake McDonald. It has been park policy to acquire private property within park boundaries when it becomes available. In the meantime, private owners follow park codes with regard to their private property. Whenever private property is acquired, a decision has to be made whether or not to return the land to a natural condition. This is sometimes a difficult decision, such as when the park acquired a private lodge just east of Lake McDonald Lodge in the late 1970's. The private lodge blended in well with the natural surroundings. Nonetheless, the buildings were hauled away and the land was restored to its natural state. In this case the Park Service gave land back to nature. In another situation, a beaver family built a dam and lodge in part of Sprague Creek picnic area. The Park Service decided that the beavers had first rights to the land. A couple of tables were moved and now the picnic area is a little smaller.

In fact, it is park policy to use only land that is already committed to development. New structures must conform to construction patterns that blend in with the natural environment. This kind of construction is often expensive and time-consuming but necessary to maintain Glacier's cultural heritage.

The Apgar area is heavily used by park visitors. Visitors are often unaware of the impact that they have on the environment when they cut across a meadow, stand on a creekbank, or chop a small limb off a living tree for firewood. The cumulative impact is obvious over time. Park personnel spend a lot of time putting up signs and enforcing rules for preservation of the natural environment. The park maintains a nursery at Park Headquarters where native plants are cultivated for revegetation of heavily impacted areas and near construction and maintenance projects. If the Park Service did not restore such areas, the damage would very soon change the character of the park. Many native plants, especially in alpine areas, are highly sensitive to heavy visitor impact. So, if you see blacktopped pathways and chained-off meadows, please understand that they reduce the impact on the land. Please stay on the trails.

You can ask to see the nursery and other examples of National Park Service efforts to restore and preserve the park.



Park Visit Activity 4

Giving It Back to Nature

Apgar

Objective:

Students will analyze a complex park management situation, discuss the situation, come to a consensus, and make a decision on the action to be taken. Students will become familiar with a decision-making process that is used by land managers.

Background:

To illustrate how difficult preservation and restoration decisions can be, the naturalist will present a hypothetical situation for the group to consider and resolve.

Suppose, as sometimes happens, that the last living member of a family that pioneered in the Apgar area has died and left the family cabin to Glacier National Park. The cabin has not been used for years and would be expensive and difficult to restore. The donating family was not well known, but they were in the area before the park was established. It is unlikely that anyone would know or object if the cabin simply disappeared.

Our committee has a number of options to consider. We could demolish the cabin and restore the land to a natural state. We could leave the cabin to deteriorate on its own. We could leave it to deteriorate and put a historical site sign by it to encourage people to respect it and leave it alone. We could do a minimal upgrade on it for use as a Park Service facility. We could restore the cabin to its original condition and open it to visitors.

Procedure:

1. Assign groups of students to represent the various points of view presented in the options above. Ask them how they would feel if they were Park Service managers, a Sierra Club member, a descendent of an Apgar pioneer family, or a descendent of an American Indian tribe that once used this area as a ceremonial gathering place
2. Give the students time to prepare the points of view for each group, and then call them together for a meeting to reach a decision about the cabin.
3. Have someone other than the naturalist or the teacher act as chairperson for the meeting and appoint a small group of non-debaters to act as a jury to hear the positions and make the final decision.
4. After the debate, the naturalist will explain how park policy usually works in such cases.



Back in the Classroom

Back in the classroom, take the time to reinforce the Park Visit experience. Discuss the field trip with the students and decide what worked and what didn't. Be sure to fill out the evaluation form and return it to the park. Some follow-up activities for the Humans and Glacier National Park Track include:

1. Invite a National Park representative to come to your class and talk about management issues (anything from bears and wolves to managing 2 million visitors).
2. Write a letter to the park naturalist that led the Park Visit activity. Have the students tell the naturalist at least one fact learned during the visit.
3. When the class returns to school, invite someone who had extensive experience with the 1964 flood to talk to the class. The Blackfeet Tribal Council has many copies of *Flood*, the story of the 1964 Blackfeet disaster, that they may share with your class.
4. When the class returns to school have the students interview elders and other community old-timers about life in the area when they were children. Have the students write up the elders' stories and share them with the class. It is sometimes easier to do oral history interviews with a tape recorder and transcribe the interview later. The University of Montana archives and the state archives in Helena are interested in receiving and preserving oral histories compiled by students.

