Snow Leopard REPORTS

Research Note

Snow Leopard Reports, 3 (2024): 69-78
http://dx.doi.org/10.56510/slr.v3.22114

Reflections from a snow leopard eco-camp program in Mongolia

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Key words
snow leopard; education; Mongolia; children

ARTICLE HISTORY:
First Submission: February 2, 2024
Second submission: June 22, 2024
Third submission: October 17, 2024
Accepted: October 29, 2024
First published online: November 25, 2024

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Abstract

Environmental education can efficiently engage individuals in addressing environmental challenges and promote collaboration among stakeholders. The aim of this paper was to understand how children participating in eco-camps perceived nature and the environment. Additionally, we aim to share our experiences from eight years of eco-camp activities conducted for sixth-grade students (aged 12-13 years) in the Gobi region of southern Mongolia. The program utilized active learning in snow leopard habitats. We used creative expressions, specifically write-ups such as poems, to capture the children's perceptions and feelings about nature. The findings revealed that the children participating in the program conveyed a sense of awe for nature and awareness of ecosystem services. Feedback from parents

and teachers indicated that the program was effective at creating positive changes in the children's behavior. While short-term outcomes were evident, further investigation into the long-term sustainability of these changes are needed.

Introduction

Environmental education can effectively inform and engage people to address environmental challenges and promote collaboration among stakeholders (Kruse, 2004, Ardoin, 2020). It involves developing attitudes, values, awareness, knowledge, and skills that prepare people for informed environmental action (Birdsall, 2010, Monroe, 2016). Children are a crucial audience as they often develop long-lasting attitudes towards nature and the environment early on (Dobson, 2007, Niederdeppe, 2021). Outdoor activities have been shown to enhance children's learning and understanding of nature and the environment (Robinson, 2001). Educational programs for children can support conservation and environmental engagement by increasing knowledge and attitudes towards the environment and endangered species (Grúňová, 2017; Frame, 2021).

Since 2014, the Snow Leopard Conservation Foundation and its partners have implemented an education program for children in the Tost Mountains of southern Mongolia to promote community-based conservation efforts by educating children about local wildlife. The purpose of this paper is to understand how the participating children perceived nature and the environment. Additionally, we also share our experiences from eight years of eco-camp activities in the Gobi region of southern Mongolia.

Methods

Eco-camp program description

The eco-camp program aims to promote a sense of pride in the local environment and ownership of environmental actions. We believe that this sense of pride and ownership will spread throughout the wider community through interactions with friends and family members. The five-day eco-camps are for children in grade six (aged 12-13 years) and are held during the summer months. The program emphasizes active learning in snow leopard habitats and focuses on raising awareness about the local biodiversity and environment through nature-based lectures and exploring the natural environment (Figure 2). Most activities take place outdoors and include interactive learning, games and knowledge sharing (see Appendix 1 for detail). Each year, we invite 40 children from the district center to participate in the eco-camps, although the program was suspended for two years (2020-2021) during the COVID-19 pandemic. We also invite two teachers from the district center each year to join the program.

We invited children from the Gurvantes district center in the South Gobi province (aimag) of southern Mongolia (See Figure 1; Table 1). In 2014 and 2017, we also invited children from Bayangobi and Sevrei district centers. Of these three districts, Gurvantes is the largest, with a population of 4,840 inhabitants in 2022 based on local government statistics. In comparison, Bayangobi and Sevrei had populations of 2,753 and 2,010 inhabitants, respectively, in 2022 based on local government statistics. Each district center has one public school with a student population ranging from about 800 to 1,000 students aged 6 to 18 years.

Figure 1. *Location of the Tost Mountains in southern Mongolia where the eco-camps are held. Also shown on the map are the three districts from which the participants at the eco-camps came from, the extent of the Tost-Tosonbumba Nature Reserve, and the capital Ulaanbaatar.*

Figure 2. *Nature based activity in snow leopard habitat in the Tost Mountains focusing on raising awareness about the local biodiversity and environment through exploratory learning.*

Table 1. *Participant profile in the snow leopard Eco-camps in 2014-2022.*

District	Gurvantes		Bayangobi		Sevrei		Total	
Year	**Girls**	**Boys**	**Girls**	**Boys**	**Girls**	**Boys**	**Girls**	**Boys**
2014	12	8	8	12	0	0	21	19
2015	20	20	0	0	0	0	20	20
2016	21	19	0	0	0	0	21	19
2017	10	10	0	0	9	11	22	18
2018	19	22	0	0	0	0	19	22
2019	23	17	0	0	0	0	23	17
2022	24	18	0	0	0	0	24	18
Total	**129**	**114**	**8**	**12**	**9**	**11**	**150**	**133**

The five-day eco-camp takes place in the Tost-Tosonbumba Nature Reserve, where the Snow Leopard Conservation Foundation and the Snow Leopard Trust have had a research station since 2008. This nature reserve is an extension of the Gobi-Altai mountain range, known for its rugged terrain, desert steppe, and semi-desert grasslands. It contains diverse wildlife populations, including snow leopards (*Panthera uncia*), wolves (*Canis lupus*), Eurasian lynx (*Lynx lynx*), ibex (*Capra Sibirica*), argali sheep (*Ovis ammon*), bearded vultures (*Gypaetus barbatus*), golden eagles (*Aquila chrysaetos*), and black vultures (*Aegypius monachus*) (Sharma, 2014).

Program monitoring and assessment

To assess the efficiency and effectiveness of the eco-camps, the Snow Leopard Conservation Foundation has monitored eco-camp activities since 2014, focusing on input, process, and output indicators. These indicators include children's gender and background (herder children vs other background), as well as the number and types of activities conducted at the camp. In addition, the school administration provides us with the number of grade six students in Gurvantes, Bayangobi, and Sevrei.

In 2022, we asked the children to express their interactions and emotions towards nature in any creative form they felt comfortable with, such as short write-ups (including poems), videos, drawings, or other mediums. This exercise encouraged children to articulate their feelings and connections with nature. Write-ups were the most common method used by the children to convey their thoughts. The program coordinator then evaluated their interactions and emotions towards nature in the write-ups shared with us, noting that not all children wished to share their work. In total, we analyzed 10 write-ups. Before using the children's write-ups, we received written consent from their parents to do so. The evaluation used deductive coding to capture references to nature, ecosystem services, and associated emotions (see Table 2 for definitions

Table 2. *Definition of the below mentioned ecosystem services and other terms are from Millennium Ecosystem Assessment (2005), IPBES IAS Assessment (2022) and Damasio (2004). We defined ecosystem services as the benefits people obtain from nature and the environment following the Millennium Ecosystem Assessment (2005).*

Terms	Definitions
Natural elements	**Natural elements are elements that have been produced by nature, without the intervention of humans.**
Wildlife	The native fauna of a region.
Human elements	The human element is a generic term to describe what makes humans behave the way they do and the consequences that result from these behaviors.
Feeling	The capacity or ability to experience physical sensations (such as pain, touch, or temperature) that is mediated chiefly by end organs and sensory receptors in the skin.
Emotions	Emotions are unconscious mental reactions (such as anger or fear) that are typically accompanied by physiological and behavioral changes in the body.
Aesthetic value	The positive value that an object or event possesses when appreciated or experienced aesthetically.
Ecosystem services	**Ecosystem services are the benefits people obtain from nature and the environment.**
Cultural services	Cultural services are non-material benefits provided by nature and the environment.
Regulating services	Regulating services are benefits obtained from the regulation of ecosystem processes.
Provisioning services	Provisioning services are products obtained from nature and the environment.

of the natural elements and ecosystem services used). Expressions and feelings could fall into more than one of these categories. To examine the children's connection and appreciation of nature as expressed in the write-ups, we used the Atlas.ti analysis tool (Hwang. 2008) to count how frequently children referred to a set of predefined natural elements and ecosystem services in their poems. The write-ups were translated into English (before they were entered into Atlas.ti). The translations were made by the first author who is fluent in Mongolian and English.

The decision to use creative expressions was influenced by feedback from previous eco-camp sessions (i.e. before 2022) where the participants indicated they felt more comfortable expressing their thoughts and feelings about nature through creative means rather than responding to a fixed questionnaire.

In 2022 we also requested feedback from parents and teachers on what the children had learned and how the program could be improved. For parents, this was done through informal conversations and through written feedback where 6 parents provided feedback through conversations and 5 parents by written feedback. Four of the teachers who participated in the eco-camp sent written feedback.

Results

Eco-camp participation and reach

A total of 283 children attended the eco-camps in Tost from 2014 to 2019 and again in 2022 to 2023 (See Table 1). Among them, 158 participants (56%) were herder children, while the remaining 125 (44%) were non-herder children living in the district centers. On average, 53% of the participants were girls and 47% were boys. The eco-camp included children from Gurvantes district throughout all eight years. In 2014, the eco-camp also included 20 children from Bayangobi, and in 2017, it included 20 children from Sevrei district. The number of sixth-grade students from Gurvantes ranged from 279 to 420 between 2014 to 2022, with participation rate varying from 6% in 2017 to 15% in 2022 among all children of that age group in Gurvantes. The participation rate of sixth-grade students from Bayangobi was 8% in 2014, while the participation rate of sixth-grade students from Sevrei was 6% in 2017. Thirteen teachers from Gurvantes, one teacher from Sevrei, and one teacher from Bayangobi participated in the eco-camps between 2014 to 2022. One teacher from Gurvantes participated in two eco-camps.

Interactions and emotions towards nature as expressed in write-ups

Local natural elements were mentioned in all 10 write-ups and a total of 42 times. The predominant focus was on environmental elements (mentioned 22 times), and included air, water, river, wind and others. Wildlife (mentioned 16 times), with references to birds, flies, bumble bees, lizards, was the second-most cited natural elements. Human elements were referenced twice, specifically related to motorbike sounds and recalling the teacher's remarks about the interconnectedness of nature. Plants were also mentioned twice. Overall, the write-ups expressed admiration for the beauty of the natural surroundings and its diverse elements a total of 22 times.

Ecosystem services were mentioned 37 times: cultural services were referenced 14 times, regulating services 12 times, and provisioning

services 11 times. In terms of cultural services, the children expressed aesthetic values and their appreciation for the natural environment through quotes such as:

> *"Birdsong sounds like an opera. The earth, soil, wind, and water here are truly wonderful, having aesthetic value from nature."*
> (Boy from Gurvantes district, 2022)

Regulating services were highlighted through quotes such as:

> *"We need to save the atmosphere from greenhouse gasses and fossil fuels which pollutes the sky"*
> (Girl from Gurvantes district, 2022)

Provisioning services were exemplified by references to water and pasture, as seen in the following quote:

> *"Water is worth more than human life. The wind, for instance, is like some magnum opus. This vale of gales is an earthbound ocean"*
> (Boy from Gurvantes district, 2022)

The children also recognized the interconnectedness of animals with the natural world, with phrases such as:

> *"Realizing that animals are related to all things"*
> (Boy from Gurvantes district, 2022)

The children expressed their feelings and emotions towards nature and the environment a total of 19 times in their write-ups. We categorized these expressions into five different emotions. Comfort was the most commonly expressed emotion, mentioned six times, highlighting the positive experience of spending time in nature. This sentiment was captured in quotes such as:

> *"Perhaps the lull of nature exists in a peaceful stature"*
> (Girl from Gurvantes district, 2022)

> *"The environment has such a beautiful sound"*
> (Girl from Gurvantes district, 2022)

Curiosity and wonder were also prominent emotions expressed five times in the write-ups. The children marveled at the wonders of nature with lines such as:

> *"Winds blow as I sit back, soon abated but returning, is the gust redoubling?"*
> (Girl from Gurvantes district, 2022)

> *"Never seen such an enchanting sight, wouldn't have known such a secret"*
> (Girl from Gurvantes district, 2022)

The children also showed a deep curiosity, as seen in the quote:

> *"It's voice is meshed ubiquity and snatches my inner curiosity. To wonder about this creation."*
> (Girl from Gurvantes district, 2022)

Feedback from parents and teachers

In 2022, six parents provided feedback through conversations and five submitted written feedback (a total of eleven parents provided feedback). Four teachers who participated over the years in the eco-camp program also sent written feedback. Feedback from participants' families was consistently positive, comprising both written and verbal expressions of satisfaction. Specifically, parents noted positive changes in the children's behavior, such as a heightened awareness of environmental conservation and a more thoughtful approach to living sustainably and protecting the natural environment. In the feedback received from 100% of parents, a common theme emerged: parents expressed pride in their children's learning experiences during the program and happiness about their participation in the eco-camps. One parent shared a specific instance:

> *"I was pleasantly surprised. Normally, when a spider crawls around my house, we instinctively kill it and get rid of it. This time, I was about to do the same, but my daughter promptly stopped me, saying, 'We can relocate the animal without harming it.' She then went on to explain the significance of the spider in the environment. Her initiative and articulate explanation truly impressed me, and I couldn't be prouder of my daughter."*
>
> (quote from a 40-year-old mother)

Another parent shared the following feed-back:

> *"After the eco-camps experience my daughter taught us some lessons for our family. She said that we needed to reduce consumption of plastic bags and plastic bottles. Initially, I did not bother much. But she started pressuring us to not buy plastic bags when we went shopping and to not buy small bottles of plastic water and drinks. She started to be concerned about the garbage we produced as a family and we started being more careful and reducing the amount we produced"*
>
> (quote from a 35-year-old father).

All four teachers reported positive experiences and expressed their willingness to share their insights with other educators. They were also eager to integrate similar outdoor experiences into their classroom curriculum. Some teachers were pleasantly surprised by the heightened level of engagement and enthusiasm displayed by children that had participated in the eco-camps when exposed to experiential learning outdoors. They shared how they thought the outdoor experiences proved effective in expanding the children's knowledge and broadening their overall experiences.

Discussion

Public engagement and environmental education have proven effective in promoting awareness of environmental challenges and support for conservation (Kruse. 2004, Ardoin. 2020). Our work focused on children participating in eco-camps in the Tost Mountains, revealing a notable connection and appreciation for nature and the environment. Following the eco camps, there was an increase in knowledge and appreciation for nature as expressed by teachers and parents, a positive outcome that aligns with the effectiveness of using write-ups and poems as a tool for examining this connection (Nosek. 2009, Dai. 2022).

The children's admiration for the natural surroundings and their appreciation of eco-system services, showcased a deep under-standing. Some children referred to regulatory ecosystem services and the interconnectedness of different ecosystem components. The strong appreciation and connection to nature among the children mirror findings from other parts of the world, underscoring the importance of engaging children early on for the establish-ment of lasting connections with nature (Dobson, 2007; Witt, 2013; Niederdeppe, 2021).

Feedback from teachers and families corroborated the positive impact of the eco-camps, indicating an increased knowledge and appreciation for nature and the environment among participating children, similar to the findings in other environmental education programs (Ardoin. 2020). Notably, the awareness of nature and the environment among the children extended to their families and friends through subsequent discussions, highlighting the spillover effects that have been observed also in other environmental programs (Whitehouse. 2014, Chimed. 2023). However, it is crucial to acknowledge that our follow-up was conducted shortly after the eco-

camp experience, leaving the long-term and permanent changes uncertain. In addition, we were not able to interview all parents of the attending children. Understanding the lasting outcomes of eco-camps and their contribution to conservation over extended periods requires further investigation (Stern. 2008, Collado. 2013).

Our team ensured a balanced gender ratio among the children attending the eco-camp, with 53% girls and 47% boys. Other research in snow leopard landscapes have highlighted how women or girls can have negative preconceptions about wildlife (Suryawanshi. 2014, Alexander. 2023, Chimed. 2023). This underscores the importance of gender-inclusive environmental engagement. Additionally, half of the eco-camp attendees were herder children, emphasizing the significance of connecting with this group as they share landscapes with snow leopards (Dickman, 2013, Mijiddorj, 2018).

We have successfully operated the eco-camp in Gurvantes since 2014, focusing on areas with ongoing snow leopard conservation activities. In some years, 15% of children aged 12 to 13 attended the eco-camp, representing a relatively large proportion of the age group from one district. However, the geographical coverage of the eco-camps is limited to Gurvantes and neighboring districts. Gurvantes was selected for the eco-camps because it is a hotspot for snow leopard conservation and community engagements (Young, 2021). Before expanding eco-camps into larger areas, we recommend strengthening the existing program. To enhance the impact of our efforts, we suggest supporting an eco-club within the school itself to help the children to remain active throughout the year. Additionally, providing teachers with resources and training to offer classes on mountain and steppe ecology year-round could further strengthen the existing program before expanding into larger areas.

In summary, our work shows that children attending the eco-camps have a strong appreciation for their environment in the Gobi. However, long-term monitoring of connectedness and appreciation for nature and the environment is important for understanding how eco-camps may result in more permanent and sustained conservation engagements. Our eco-camps reached between 5 and 15% of grade six students in Gurvantes which we hope will help to foster greater awareness and future conservation engagements. Here positive views towards nature and the environment during and following the eco-camps are particularly encouraging. However, further studies are needed to examine for more permanent and long-term impacts of eco-camps and their contribution to conservation.

References

ATLAS.ti Scientific Software Development GmbH (2023) ATLAS.ti Mac (Version 23.2.1) [Computer program]. Available at: https://atlasti.com (Downloaded: 27 July 2023).

Alexander, J. S., Murali, R., Mijiddorj, T. N., Agvaantseren, B., Lhamo, C., Sharma, D., ... & Young, J. C. (2023). Applying a gender lens to biodiversity conservation in High Asia. Frontiers in Conservation Science, 4, 1006052.A

Ardoin, N. M., Bowers, A. W. and Gaillard, E. (2020) "Environmental education outcomes for conservation: A systematic review," *Biological conservation*, 241(108224), p. 108224. doi: 10.1016/j.biocon.2019.108224.

Aryal, A., Brunton, D., Ji, W., Barraclough, R. K., & Raubenheimer, D. (2014). Human–carnivore conflict: ecological and economical sustainability of predation on livestock by snow leopard and other carnivores in the Himalaya. Sustainability Science, 9, 321-329.

Birdsall, S. (2010) "Empowering students to act: Learning about, through and from the nature of action," *Australian journal of environmental education*, 26, pp. 65–84. doi: 10.1017/s0814062600000835.

Collado, S., Staats, H. and Corraliza, J. A. (2013) "Experiencing nature in children's summer camps: Affective, cognitive and behavioural consequences," Journal of environmental psychology, 33, pp. 37–44. doi: 10.1016/j.jenvp.2012.08.002.

Cronin, C. and Hawthorne, C. (2019) "'Poetry in motion' a place in the classroom: Using poetry to develop writing confidence and reflective skills," *Nurse education today*, 76, pp. 73–77. doi: 10.1016/j.nedt.2019.01.026.

Chimed, O., Lkhagvasuren, D., Alexander, J. S., Barclay, D., Bayasgalan, N., Lkhagvajav, P., ... & Samelius, G. (2023). Delivery of educational material increased awareness of the elusive Pallas's cat in Southern Mongolia. *Applied Environmental Education & Communication*, *22*(1), 1-12.

Dai, P., Zhang, S., Gong, Y., Yang, Y., & Hou, H. (2022). Assessing the inspirational value of cultural ecosystem services based on the Chinese poetry. Acta Ecologica Sinica, 42(5), 467-475.

Damasio, A. R. (2004). "Emotions and feelings. In Feelings and emotions" The Amsterdam symposium (Vol. 5, pp. 49-57). Cambridge: Cambridge University Press.

Dickman, A., Marchini, S. and Manfredo, M. (2013) "The human dimension in addressing conflict with large carnivores," *Key Topics in Conservation Biology 2*. Wiley, pp. 110–126. doi: 10.1002/9781118520178.ch7.

Dobson, A. (2007) "Environmental citizenship: towards sustainable development," *Sustainable development*, 15(5), pp. 276–285. doi: 10.1002/sd.344.

Frame, J. R., Good, B., Slinger, P., Smith, M. P., Butler, B., & Marancik, D. (2021). Measuring of the effects of a sea turtle conservation education program on children's knowledge and attitudes in Grenada West Indies. Ocean & Coastal Management, 211, 105752.

Grúňová, M., Brandlová, K., Svitálek, J., & Hejcmanová, P. (2017). Environmental education supports conservation action by increasing the immediate and long-term environmental knowledge of children in West Africa. Applied Environmental Education & Communication, 16(1), 3-16.

Hwang, S. (2008) "Utilizing qualitative data analysis software: A review of Atlas.Ti," *Social science computer review*, 26(4), pp. 519–527. doi: 10.1177/0894439307312485.

Islar, M., Balvanera, P., Kelemen, E., Pascaul, U., Subramanian, S. M., Nakangu, B., Porter-Bolland, L. (2022). Methodological Assessment Report on the Diverse Values and Valuation of Nature of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services.: Chapter 6: Policy options and capacity development to operationalize the inclusion of diverse values of nature in decision-making.

Kling, K. J. and Hopkins, M. E. (2015) "Are we making the grade? Practices and reported efficacy measures of primate conservation education programs," *American journal of primatology*, 77(4), pp. 434–448. doi: 10.1002/ajp.22359.

Kruse, C. K. and Card, J. A. (2004) "Effects of a conservation education camp program on campers' self-reported knowledge, attitude, and behavior," *The journal of environmental education*, 35(4), pp. 33–45. doi: 10.3200/joee.35.4.33-45.

Levick, W. R. (2010) "Observer rating of memory in children: A review," Brain impairment: a multi-disciplinary journal of the Australian Society for the Study of Brain Impairment, 11(2), pp. 144–151. doi: 10.1375/brim.11.2.144.

Monroe, M. C. and Krasny, M. E. (2016) *Across the spectrum: Resources for environmental educators*. North American Association for Environmental Education.

Mijiddorj, T. N., Alexander, J. S., Samelius, G., Badola, R., Rawat, G. S., & Dutta, S. (2018). Corrigendum to: Livestock depredation by large carnivores in the South Gobi, Mongolia. Wildlife Research, 45(4), 381-381.

Millennium Ecosystem Assessment, 2005. Ecosystems and human well-being: Wetlands and water synthesis. World Resources Institute, Washington, DC.

Niederdeppe, J., Winett, L. B., Xu, Y., Fowler, E. F., & Gollust, S. E. (2021). Evidence-based message strategies to increase public support for state investment in early childhood education: results from a longitudinal panel experiment. The Milbank Quarterly, 99(4), 1088-1131.

Nosek, A. (2009). "Poems for children as a means of conveying knowledge about the region", In Nuevas perspectivas para la difusión y organización del conocimiento: actas del congreso (pp. 211-215). edUPV, Editorial Universitat Politècnica de València.

Prokop, P., Usak, M., & Erdogan, M. (2011). Good predators in bad stories: Crosscultural comparison of children's attitudes towards wolves. Journal of Baltic Science Education, 10(4), 229-242.

Sharma, K., Bayrakcismith, R., Tumursukh, L., Johansson, O., Sevger, P., McCarthy, T., & Mishra, C. (2014). Vigorous dynamics underlie a stable population of the endangered snow leopard Panthera uncia in Tost Mountains, South Gobi, Mongolia. PloS one, 9(7), e101319.

Stern, M. J., Powell, R. B. and Ardoin, N. M. (2008) "What difference does it make? Assessing outcomes from participation in a residential environmental education program," The journal of environmental education, 39(4), pp. 31–43. doi: 10.3200/joee.39.4.31-43.

Skyggebjerg, A. K. (2018) "Poetic constructions of nature: The Forest in recent visual poetry for children," in *Ecocritical Perspectives on Children's Texts and Cultures*. Cham: Springer International Publishing, pp. 141–155.

Suryawanshi, K. R., Bhatia, S., Bhatnagar, Y. V., Redpath, S., & Mishra, C. (2014). Multiscale factors affecting human attitudes toward snow leopards and wolves. Conservation Biology, 28(6), 1657-1666.

Witt, Annick Hedlund-de (2013) "Pathways to environmental responsibility: A qualitative exploration of the spiritual dimension of nature experience," *Journal for the Study of Religion Nature and Culture*, 7(2), pp. 154–186. doi: 10.1558/jsrnc.v7i2.154.

Vaughan, C., Gack, J., Solorazano, H., & Ray, R. (2003). The effect of environmental education on school-children, their parents, and community members: A study of intergenerational and intercommunity learning. The Journal of Environmental Education, 34(3), 12-21.

Young, J. C., Alexander, J. S., Bijoor, A., Sharma, D., Dutta, A., Agvaantseren, B., ... & Mishra, C. (2021). Community-based conservation for the sustainable management of conservation conflicts: Learning from practitioners. Sustainability, 13(14), 7557.

Appendix 1: Example Agenda for General Five Day Eco-Camps Curriculum

DAY 1

1. **Introductory Session:** Start with joyful games to break the ice and foster a friendly atmosphere.
2. **Exploring the Local Environment:** Discuss the types of wildlife and plants in the area, emphasizing how people benefit from their surroundings.
3. **Enhancing the Sense of Touch:** Connect with nature through tactile experiences. By touching natural objects, children will sharpen their sense of touch and gain a deeper understanding of nature's intriguing aspects.
4. **Understanding Vulnerable and Threatened Species:** Engage in group discussions about vulnerable wildlife and plants to help children comprehend the reasons behind their threats.
5. **Three-Stone Game – Stone Painting:** Encourage creativity as children paint stones, transforming them into unique pieces of art.

DAY 2

1. **Wildlife Signature:** Visit the main habitat valley of snow leopards to observe direct and indirect signs of wildlife.
2. **Reflection on Snow Leopard Life:** After the trail visit, discuss the "Snow Leopard Cub" book to reflect on the life, biology, and ecology of snow leopards.
3. **Snow Leopard and Prey Animal Game:** Help children understand the food chain and the importance of carnivores in nature through interactive play.
4. **Research Insights:** Show slides illustrating how researchers conduct studies on snow leopards.

DAY 3

1. **Sighting Sense – Drawing Session:** Encourage children to find and use as many natural colours as possible in their drawings, enhancing their awareness of nature.
2. **Biodiversity Game:** Ask kids to name their favourite animals, then discuss each animal's role in the ecosystem.
3. **Adaptation Discussion:** Explain how plants and animals develop special structures and behaviours to adapt to their environment for survival, providing examples from wildlife.
4. **Taste Exploration:** Engage children's sense of taste by sampling natural items (e.g., plants, water) to strengthen their connection with nature.
5. **Garbage Talk:** Discuss the impact of garbage on the environment, focusing on decomposition times and the dangers of toxic waste.

DAY 4

1. **Sense of Smell:** Explore various natural scents, particularly from mountain plants, to deepen understanding of plant characteristics.
2. **Water Conservation Session:** Investigate daily water usage in households to promote water conservation awareness.
3. **Pasture Changes Discussion:** Examine changes in local pastures, exploring reasons for these changes and their consequences.
4. **Listening to Nature – Silent Session:** Enhance hearing skills by encouraging children to listen attentively to their environment and document their feelings.
5. **What If I Were a Plant or Animal?:** Have children write letters advocating for proper treatment of wildlife.

DAY 5

1. **My Contribution to Conservation:** Summarize what has been learned throughout the week, allowing children to express their thoughts on wildlife conservation and write down their commitments to protect nature.
2. **Conflict Role Play – Coexisting or Conflicting?:** Brainstorm solutions for living harmoniously with wildlife while protecting livestock in natural habitats.
3. **Poster Session:** Form groups to create posters illustrating key takeaways from the project.
4. **Creative Reflection:** Ask children to write a poem about their connection with nature, aiming to capture their impressions and feelings toward the natural world.

Extra Notes:

This agenda summarizes main activities while allowing flexibility for new exercises based on weather and timing. The focus is on maintaining high-quality themes and effective debriefing sessions. Most activities will be conducted outdoors whenever possible, complemented by fun games related to environmental themes and conservation efforts.