

Education Toolkit Summary

Material to be purchased for Education Tool Kit

Sr no	Items to procure	Specifics	Remarks
1	Story books for the students: Ranjini's Gyalmo and Lobzang's Encounter with snow leopard	To distribute 8 story books for each school. 400 story books in total for 50 schools	To be distributed in schools and engage students in storytelling, reading or read-aloud sessions specifically exploring theme of conservation and human-wildlife interaction from a children's perspective
2	Foldscope Kit	Comprises 100 assembled foldscope with accessories.	To include 2 foldscopes per kit. This kit can be used to explore the hidden world around us among other things.
3	Spiti Bird booklets	10 bird booklets for each school (50 school in total)	Use birdbooklets as an awareness resource
4	Season watch booklets	20 season watch booklets for 10 selected schools	To engage 10 schools for the pilot plan
5	Stationary	to be distributed among 50 schools	Basic stationery for students while conducting activities.
6	Transact Game: Fauna Bingo	to distribute 5 games per school (50 schools in total)	Fun learning activity with students

Material in one tool kit:

Sr No	Toolkit material	Quantity
1	Story Books: Ranjini's <i>Gyalmo</i> and Lobzang's <i>Encounter with SL</i>	8 books in each toolkit (4 copies of each)
2	Spiti Bird booklets	10 bird booklets in each toolkit
3	Season watch booklets	20 seasonwatch booklets
4	Foldscopes	2 foldscopes with accessories
5	Stationery Items	20 drawing books, 2 pencil sets, 4 crayon packs, 4 pencil color packs, 3 water color tablets
6	Transact Game: Fauna Bingo	5 games in each toolkit
7	Workbook	1 per box
		Total cost of a kit
Sr no	Other items for education kit	Remarks
8	Binoculars	In stock and to be used on rotational basis for schools
9	Magnifying Glass	In stock & to be used on rotational basis for schools

Note:

- We have curated toolkit material for 50 schools across Lahaul-Spiti and Kinnaur with 1 toolkit package for 1 school (**i.e 50 toolkits for 50 schools**)
- Any suitable class (*6th to 8th grade*) with approximately 20 students will be engaged for activities and distribution as that's the general strength of students in Spitian/Kinnaur schools. However,

this is just a crude assumption and we will tweak the distribution method accordingly once we have better clarity on the total number of schools/students to be engaged.

- A Standard ToolKit will consist of material like Workbook, Storybooks, Birdbooklets, Seasonwatch booklets, Foldscopes, Stationary items, Bingo games. But magnifying glasses and binoculars will be used on a rotational basis among schools.

Material Purchase list for Education work:

Sr no	Material	Quantity	Remarks	
1	Drawing Books	1000 books		
2	Note books	1000 books	Small, single line	
3	Crayons	250 packs	24 or 16 shades	200 for toolkit, 50 for camp
4	Pencil colors	250 packs	12 shades	
5	Water color tablets	150 packs	12 shades	The one which has free brush inside
6	Pencil sets	100 packs	10 units	
7	Bold color markers	50 pieces	Mix colors	
8	Charts	50 pieces	Mix colors	
9	Pens	100	Blue and black	

Engagement plans for toolkit:

Activity Prompts for Storybooks:

- Gyalmo, the queen of the mountains by Ranjini Murali
- Our Encounter with a Snow Leopard by Lobzang Le

1) Reading and storytelling

Students can read the story books (either individually or in small groups) and discuss both the stories and the main characters of the stories.

Discussion for *Gyalmo*:

They can further discuss the key features of Snow Leopard habitat - where these elusive big cats can be found in the world and what geographical areas they inhabit. Ask whether Snow Leopards are found in their village areas, have they ever seen one and what animals they prey on.

Discussion Hint:

Main characters in the story: *Koyna* - the young explorer, *Gyalmo* - the queen of the mountains (Snow Leopard) and *Bharal* (ibex).

Snow Leopard Habitat: Snow Leopards live in the mountains of Central Asia and cover a wide habitat range. It extends through 12 countries: Afghanistan, Bhutan, China, India, Kazakhstan, Kyrgyzstan, Mongolia, Nepal, Pakistan, Russia, Tajikistan, and Uzbekistan. They are adapted to the cold, barren landscape of their high altitude home. Their key prey animals are Ibex, Argali, Bluesheep.

Discussion for *Encounter with the Snow Leopard*

Students can discuss the main story of the book and what they felt when Lobzang narrated about her encounter with the Snow Leopard in the story. Ask whether their family does livestock rearing or have they ever gone out for grazing. Have they ever encountered any wild animals (Snow Leopard, fox, wolf, bear etc) or know of a friend, family member or someone in their village who has encountered them? What was it like?

Discussion Hint:

Main characters in the story: Lobzang le, Nurbu, Snow Leopard, Goat, Lobzang's mother.

Activity Box:

1) You are Pema and one day you accompany your father for village livestock grazing in the pasture. Write a diary entry of the day's experience regarding the same. (100-200 words) Students can write either in Hindi or English.

2) Draw/paint the wildlife in your village.

Note: Students can submit the activity sheet with their name, their village and their class.

2) Read-aloud

Reading aloud to children is a powerful way to engage children in storytelling. It helps them enhance reading/comprehension skills and contributes to overall language development skills. Reading stories, listening to it and responding to stories is an effective means to develop cognitive and creative skills among children. It can also imbue love for reading in the long term.

Tips for a read-aloud:

- Read-aloud is a fun learning activity. Read the story several times on your own and introspect what you love about the particular book. You will be a better storyteller if you love the book you are reading.
- Practice reading aloud the story several times before doing it with children and think of 1-2 questions related to the story for the students to respond.
- The read-aloud can be done in small groups and preferably in a semi-circle sitting arrangement so that there's better engagement with everyone in the group.
- Be kind and welcoming. Children learn better when they feel valued. Read the story title, the name of the author and illustrator and briefly tell what the story is about.
- Read the story with enthusiasm! Focus on your pitch, tone, pace, volume, eye-contact and expression for an enjoyable delivery.
- After reading, take a moment to think, reflect and discuss the experience or the story with the children.

Read-aloud example: [Link](#)

1. Read-aloud activity: Word-cloud

Read both the storybooks and make a wordcloud of how you felt after reading the story. Ask each student to express how they felt after reading the story and make a word-cloud on a drawing sheet or a chart using colors. Be as creative with your words and designs.

Word Hint: Inspiring, courageous, scared, relatable, enjoyable etc

2. Read-aloud activity: Character voice

After reading the story, let students volunteer to read-aloud the character parts. Choose one student for each main character and tell them which pages you plan to read. Allow

them a few minutes to review their parts, and then read the selection aloud to the class. You will read all the narration, but when it's time for a character to speak, he or she will stand up and do so with expression.

Character Hint. Main characters in Gyalmo (Koyna, the narrator and Gyalmo)
Main characters in Encounter with the snow leopard (Lobzang le, Narrator 1 and Narrator 2)

Learning Goal for the activity:

- Reading and comprehension
- Active listening and expression/articulation through art
- Storytelling and stimulate curiosity for the natural world

Ecological concepts involved:

- Knowing about Snow Leopard habitat
- Understanding Snow Leopard and prey dynamic
- Reflecting about local environment
- Sharing about livestock rearing and grazing practices in their villages
- Understanding larger human-wildlife interactions in high altitude landscape
- Understanding conservation through children's perspective

Activity Prompts for Foldscope

Discovering microscopic life:

Our natural world or our immediate environment forms a huge web of life - an interdependent ecosystem in itself. Ranging from gigantic snow covered mountains to the various plants/crops growing in your field to the livestock kept in your corral to the small insects crawling underground. Every organism has a life of its own, even the microorganisms which cannot be seen through a naked eye.

Using foldscope, children can now take delight in observing microscopic life forms in their surroundings. This activity can be done individually or in small groups. Children can venture out in their agricultural field, orchard, greenhouse, kitchen garden. Take a sample of objects you want to observe, place it on slide and view it.

Samples children can assess: Dried leaves, tree bark, flowers, dead insects like house flies, ants, scales on butterfly wings, dried husk, stalk of green peas/ wheat or any other crops growing in the field, mint flower, rock surface, sand etc. Students can observe any samples that's readily available in their natural environment and observe it under foldscope. They can even do comparative observations like: comparing water droplets of a clean *Chu-mig* (natural underground water) with that to grey water in the kitchen sink.

Note: Students can use Magnifying glass for dense opaque samples and foldscope for thin transparent samples for better visualization.

Unraveling mysteries of traditional crops:

Due to precarious geographical and climatic conditions, The high altitude landscapes like Lahaul-Spiti, Kinnaur and Ladakh have developed unique farming systems adapted to the local environment. Using foldscope, children can observe cell structures of traditional crops, seeds and grains. They can even compare it with the other food items in their kitchen like egg peel, onion peep, potato peel, mouldy bread/roti.

Samples children can assess: Barley grain, seabuckthorn, *Kala mattar*, *Nyuar* (Local mustard oil seed), *Palang Tsomo* or *Yaar* (local wild leafy vegetable - saag)

Activity: Cataloguing the samples:

After observing the samples, students can catalogue the cell image projected through foldscope using the cell phone coupler. They can either capture an image or the video of the cells observed and make a foldscope digital gallery.

Activity: Drawing the anatomy:

Children can draw the cell structures of the sample on their drawing book and try to identify the different anatomical features. (Eg: guessing body parts of housefly and discussing their role)

Activity: Connecting the dot:

After observing the specific sample through foldscope, students can write/discuss which cells they observed and what is the role of that cell in the larger ecosystem. (Eg: If students observed microbial structure of Black pea - Kala mattar, they can write about how this particular crop is suitable for the cold desert mountain valley like spiti, relate it to it's drought resilient properties and how all of it collectively contributes to climate change and agro biodiversity). Students can write either in Hindi or English (300-500 words)

Learning Goal for the activity:

- Observational skills
- Stimulating curiosity for microbial life forms
- Inculcating love for self experimenting
- Note taking and encouraging questions
- Peer learning and discussion

Ecological Concepts involved:

- Observing microbial cell structures
- Ecosystem processes – Students can understand different relationships between organisms by observing interactions and movement.
- Ecological Perspective – Students can take a look at an organism from an ecological perspective to foster a relationship with the species and the system.

Birding Activity: (Binoculars and bird booklets)

Birdwatching is a great way to connect with the natural world around us. Invite children to observe birds and discover a mesmerizing world of birds. Students can venture out in the field or nearby orchid and observe birds with the naked eye or through binoculars. They can focus on different characteristics of birds, listen to bird calls and try to identify the species. They can also refer to the ***Spiti Bird Booklet*** to learn more about various birds inhabiting their surroundings.

Nature Journal:

Nature journals are a great way to record one's observations, feelings and sentiments of the natural world around us and make better connections. Children can make a diary entry of their birding experience and record their observations. They can either draw, write or comic strips in their journal. The goal is to encourage children to observe keenly and learn to express their sentiments. This bird watching activity is geared towards experience rather than information.

Learning Goal for the activity:

- Exploring and observation
- Learning more about local ecology - native flora and fauna
- Birding as an experience to greater love for natural world

Ecological concepts involved:

- Learning about birds in Spiti
- Birds behaviour and their characteristics