



New Sustainable Ecological Passive Solar

Spring Dales Public School

W A K H A / M U L B E K H - L A D A K H - I N D I A

Introduction

Spring Dales Public School is situated in a remote village called Mulbekh in the Kargil District of Ladakh, Jammu & Kashmir (India). It was founded in 1992 by a small number of educated members from the community who view quality education as the most effective solution to the challenges the local people face on a daily basis.

With very limited resources, Spring Dales Public School manages to provide quality education, on a daily-basis, to 150+ young students of all ages and backgrounds.

The Principal, Tsewang Norboo, sees a bright future for the school. He has a vision...

"...to make Spring Dales Public School one of the finest so our children can receive quality education right at their doorstep without facing emotional separation from their parents and their village."



FACTS

Education and Literacy in Ladakh¹

Literacy level and educational attainment are vital indicators of development in any society. They are proven to be key factors affecting quality of life and essential demographic indicators such as birth and mortality rates (especially infant mortality), population growth, health and well-being, economic status, and migration.

Education:

- The overall literacy rate in Leh District is 62% (72% for males and 50% for females), and in Kargil District is lower at 58% (74% for males and 41% for females);
- Schools are well distributed throughout Ladakh but 75% of them provide only primary education;
- 65% of children attend school, but absenteeism of both students and teachers remains high;
- In both Kargil and Leh Districts the pass rate at school-leaving level (class X) has for many years been only 5–15%. Those who do manage to pass, less than half succeed in qualifying for college entrance (class XII).

¹<http://en.wikipedia.org/wiki/Ladakh#Education> Retrieved April 9th 2011.



FACTS

Female Literacy:

- Despite an impressive 14% overall jump in State (Jammu and Kashmir) literacy in the last ten years there is still a 20% gap in the State literacy rate between males and females;
- There is an astonishing 33% gap in literacy between males and females in the Kargil District (where Spring Dales Public School is located).

Migration:

- The migration of young people leaving their villages to obtain better education and career opportunities is becoming more common-place in Ladakh;
- This can lead to a loss of culture, traditions, and identity as well as impacted family connections;
- Due to the migration of educated people it is very difficult to recruit and retain qualified and experienced teachers in more remote areas – especially for the long-term.



FACTS

Geography:

- Many villages are farther than walking distance from the nearest school (3-5 km);
- Without student accommodation, attending school is not an option for these children who live so far away.

Finances:

- Securing long-term, financial resources to support the School, its students, teachers and staff is very difficult;
- Significant financial barriers make the School's future success uncertain.



EXISTING SCHOOL

Shortage of:

- quality classrooms
- quality school equipment
- school furniture
- qualified and experienced teachers

Absence of:

- computer and science labs
- comprehensive School Development Plan
- school financial plan to support students from poor families
- electricity supply
- accommodation and facilities for students and staff



A Vision for a financially and environmentally sustainable school that provides equal access to quality education for all social classes in Ladakh.

Quality Education

- To provide its students with a well-rounded, and modern educational scheme of the highest standard;
- To support the preservation and growth of Ladakhi traditions and culture;
- To become a model of education for other aspiring schools, and centres of education.

Equal Access

- Provide equal access to education for all social classes, regardless of economic status;
- Decrease the male/female literacy gap.

Experienced Teachers

- Recruit and retain (on a long-term basis) experienced and qualified local teachers;
- Encourage additional training to support their professional development.



FUTURE SCHOOL

Financial Stability

- Long-term, sustainable school income is required to fund teacher and staff salaries, equipment, school/ building maintenance, savings for new buildings, savings to support students from poor families, etc.

Development Plan & Management

- School Development Plan: long-term (3-5 year) plan that will be used to guide the school's success and vision, and will be used as the primary document to raise funds;
- A management team needs to be created to ensure the efficient running of the school on all levels – academically, financially and physically.

Infrastructure

- New School Campus Design: Sustainable Ecological Passive Solar heated school with minimal carbon footprint using local materials, building methods and local labor;
- Buildings include: student hostel, classrooms, computer and science laboratories, library, dining hall, assembly hall, prayer hall, sport facilities, offices, staff accommodation, required facilities, etc.



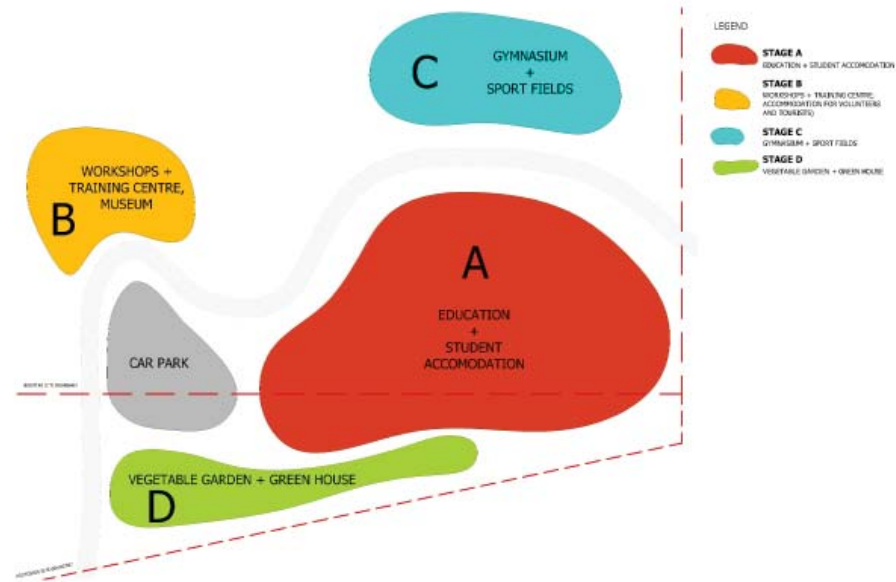
FUTURE SCHOOL DESIGN

Sustainable Ecological Passive Solar heated school with minimal carbon footprint using local materials, building methods and local labour.

Concept:

Boarding type of educational campus for 240 students - with expansion for up to 350 students - also offering education and training for adults in a cultural learning and training centre.

- Stage A - classrooms & accommodation;
- Stage B - workshops, cultural learning and training centre, museum including car park;
- Stage C - covered gymnasium, volleyball and tennis courts, cricket field, ice rink;
- Stage D - vegetable garden, green houses.



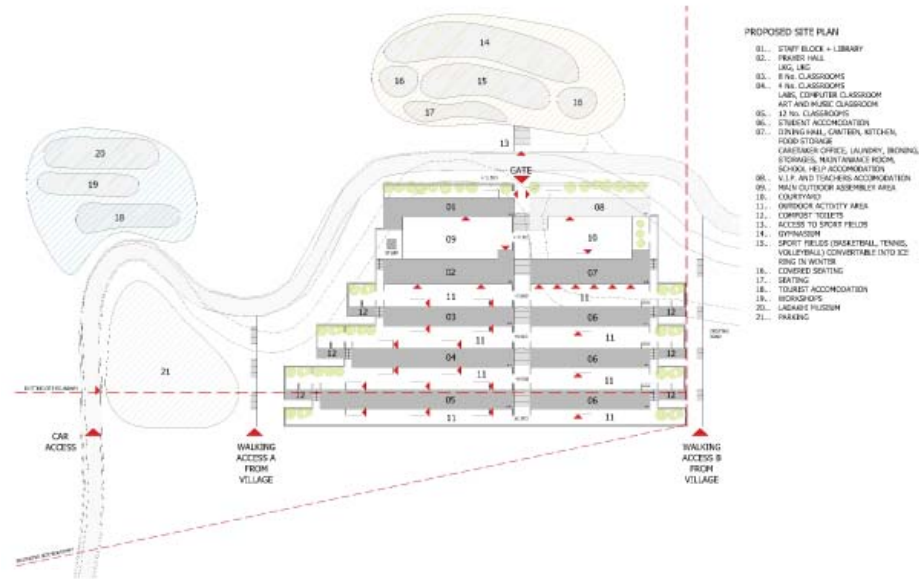
FUTURE SCHOOL DESIGN

Architectural concept:

Sustainable Ecological Passive Solar school using solar energy for building and water heating. Using local traditional building materials and techniques such as rammed earth. Incorporation of waste management.

Stage A:

- LKG & UKG classrooms
- 1ST - 10TH grades classrooms
- expansion up to 12TH grades in 2015-2018
- library
- science and computer laboratories
- prayer hall
- accommodation for approximately 100 students
- accommodation for non-local teachers & staff
- dining and assembly hall
- facilities



FUTURE SCHOOL DESIGN

- **Structure:**

- using the ancient Ladakhi traditional - rammed earth technique for walls and traditional roof build up

- **Insulation:**

- double glass for windows and solar walls

- local mineral insulation (straw, saw dust, etc.) for double walls, floors and roofs

- **Heating of buildings and water:**

- using passive solar heating principle through solar wall to store heat in walls for 'evening and night' buildings

- using direct solar gain for 'day' buildings

- heating water tank barrels through windows supported by solar panels

- **Water and electricity supply:**

- underground water + solar and hand pumps

- using solar panels to generate electricity



FUTURE SCHOOL DESIGN

Hostel

- accommodation for 30 students in one block
- 3-4 blocks in total, with potential to house 90-120 students
- house-mother room
- common hall
- inside bathroom
- solar heated



FUTURE SCHOOL DESIGN

School

- LKG & UKG classrooms
- 1ST - 10TH grades classrooms
- expansion up to 12TH grades in 2015-2018
- library
- laboratories and computer lab
- prayer hall



“Let’s join hands for a wonderful cause of educating our children for a peaceful and happy tomorrow because today’s children are tomorrow’s citizens. Let’s help them now, so that they can help others tomorrow.”

Tsewang Norboo (Principal, Spring Dales Public School)





Office of the Principal
W/M Spring Dales Public School
Mulbekh, Kargil, Ladakh

PROJECT SUPPORTED BY:

Spring Dales Public School Norboo Tsewang

norboosdps@gmail.com

Brontosaurus Movement

Hvězdová 10, Brno, 602 00,

Czech Republic

www.brontosaurivhimalajich.cz

Jiri Sazel

Jiri.Sazel@brontosaurus.cz

Martin Knap

m.knap11@googlemail.com

Kate Kittredge

kmkittredge@gmail.com

Himalayn Dialect

www.himalayndialect.canalblog.com

