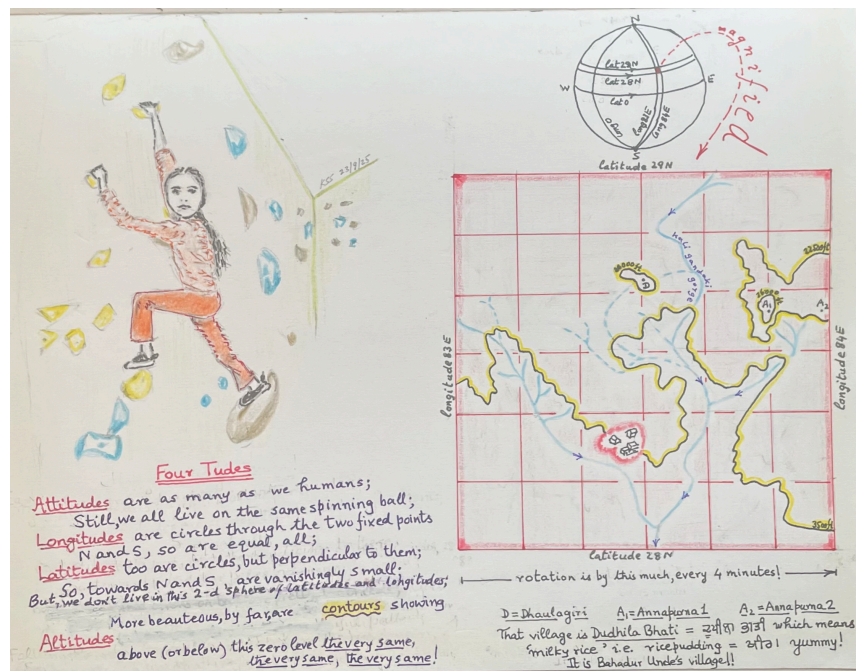


Dudhila Bhati is Bahadur's village. On 19/09/2025 he left with a nephew for the wedding there of his youngest brother, and I searched for a good map of the district. The best that popped up were political maps of that province and satellite imagery is ephemeral and just too slippery for me. So away I flew again to that nice library in Austin to fetch *Mansarovar* (1925), because all I needed is within the bottom right of this beauty between (83E,28N) and (84E,29N). The village is not marked but from what I'd gleaned I could place it almost exactly. Running a finger of my right hand over the winding contour through this spot I was soon in a very deep ravine, the elevations under my thumb rising steeply to above 8000 metre both before and after the river Kali Gandaki! The first snow white mountain is named just that: Dhaulagiri. It is 26795 ft high. The second is unnamed in this map and its peak height is a little lower; and remains that, though later this height was revised a bit upwards, and it was dubbed after the goddess of motherhood, Annapurna. Which is also the title of a 1951 bestseller, written by one of the first two alpinists who scaled it, from which book of high adventure I think some excerpts were also a part of my prescribed syllabus in Government College, Chandigarh during 1960-62.



Four tudes! Boulderling gyms were way in the future when I was the same age, but we did live in the hills, though I was more into drawing maps. So, to my sketch I have added, in the form of the wannabe song below, what I feel is the best way to introduce a child to the three basic curves that locate us on this orb, and illustrated these definitions using what I had just learnt about the awesome terrain around Bahadur's village.

Attitudes are as many as we humans;
 Still, we all live on the same spinning ball.
Longitudes are circles through the two fixed points
 N and S: so are equal, all.
Latitudes too are circles, but perpendicular to them:
 So, towards N and S, are vanishingly small. But
 We don't live in this 2-d sphere of latitudes and longitudes.
 More beautiful, by far, are *contours* showing
Altitudes above (or below) this zero level, *the very same,*
the very same, the very same!

What these three curves look like is primary, their names 84E, 28N, 3500ft, etc., are secondary, so for later on ... Useful here would be a small white ball ¹ on which one can draw, and which can be made to spin like a top for a bit, but even the steady motion of a fan say can be used to enable the child to grasp what is crucial: just two points on the ball stay fixed. Then only an antipodal pair on that ball should be distinguished by writing N, S. But there is no need to even say North, South: what I am pushing is a beautifully simple geometry naturally suggested by the orb we all live on.

The child will now see the importance of circles through N and S: rotation takes any such circle to another. And, circles perpendicular to them are perhaps even more natural: rotation preserves each one of them. So go ahead and now draw on the ball a few of each kind, with arrows on those of the latter kind, i.e., latitudes, to indicate rotation. The child will probably notice by herself that that drawn exactly between N and S is the biggest, and those nearer and nearer to N or S are smaller and smaller. On the other hand, the longitudes are all of the same size, but yes, they are very crowded near N and S. Indeed, if the child here points out that N and S are the only points through which there pass more than one longitude, give her a big shabash, and tell her that that's why N and S are assigned no longitude whatsoever.²

It is best to proceed without further ado to the necessity of marking altitudes also on the round ball. Now there will be lively questioning, for example, how can a unique fixed altitude be given to a village, or even a room with things at all sorts of heights, some of which are moving, or even to that sand-landscape we had made? So you'll have to tell her about survey markers and so on, which makes me ponder: how had these intrepid surveyors measured the height of Dhaulagiri so exactly, and well before 1925, when in fact this peak was scaled even after Annapurna? Anyway have fun, and take care that the contours of the next sand-hill-landscape you make with her, conform to my simplified map of the simply awesome terrain around Dudhila Bhati!

¹Since, all our curves are on the surface S^2 of a big perfectly round ball, viz., the 2-d sphere or 'zero level' in my song. (Using 'mean sea level' instead will lead the conversation with the child astray, and-please!-don't reveal to her right now that this 'zero level' is in fact a slightly oblate ellipsoid of revolution, so longitudes are ellipses, etc.)

²That is, no *time-of-the-day* is assigned to N or S, but *semi-longitudes* give us the local time-of-the-day at all other points: and that's why they are numbered, except for a factor of 4 ($\because 4 \times 360 = 24 \times 60$), like minutes on this *24-hour clock* we live on!