# An international Great Science Share for Schools experience in Nepal

**Helen Woodward shares her insights into linking The Derby High School in Bury to the remote Himalayan mid-hills in Nepal**

**Helen, Rafik and the Headteacher Kamal united again in 2019**

Working in Nepal is challenging on many levels: resources are limited, infrastructure is basic, and at any time there is the potential for all plans to be interrupted by natural disasters. Success requires great flexibility as well as an ability to put aside your assumptions and expectations. In this article, I reflect on the experience and review what was learned by both the children and adults when taking the Great Science Share to Nepal.

## Background

I first visited Antarastriya Yuwa Barsa School and met Headteacher Kamal Bikram in 2015. The school had no running water, no toilets, no computers, no books, no stationery and no post-15 provision. All I found were a few rough buildings and children who were keen to learn. There was no shortage of aspiration, but resources at the school were sparse. Then, two weeks later, the 2015 earthquake struck, leaving the school buildings damaged beyond repair.

Rebuilding Schools Nepal was established to develop a sustainable programme of education for the children in the five villages who could attend the school. Progress since then has brought fresh running water to the school, as well as toilets, washable sanitary kits, stationery, textbooks, backpacks for all the children, computers, large screens for group teaching, chess sets and cricket equipment!

## Planning the trip – October 2019

In October 2019, Dr. Lynne Bianchi suggested that we take the Great Science Share for Schools (GSSfS) to Nepal. I was curious about how this could work. There was still no science equipment at the school and we had planned to resource the science lab on a future trip once the new school was built. Another issue was likely to be the small luggage allowance left for our planned trip. I was already carrying 11 kilos of washable sanitary kits to distribute and I also had my sleeping bag, as I sleep in the family room at Kamal's house whilst I'm there.

*'You do know I'm not a science teacher?'* I remarked to Lynne. *'You don't need much – it can be as simple as some sheets of paper and paper clips!'* she advised.

## The idea

The idea was given as a challenge to secondary pupils at The Derby High School in Bury, who were immediately interested in supporting this idea. Taking on the problem of using only paper or basic resources, they created a film showing the children asking their science questions about seed dispersal using paper helicopter investigation

- **How long do they take to reach the ground?**
- **What happens when it's windy?**
- **What about if it rains?**

The Derby High pupils generated the ideas, created the script and made a film of their investigations. In the film they demonstrate, for the children in

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Helen introduces the GSSfS investigation to the pupils

Nepal, how to simulate the spinning fall of seeds so that we could watch it together and carry out our own investigations. By this time I felt amply equipped, I downloaded the film onto my iPad and packed it along with paper and paper clips.

## Preparation and context

Preparation for visiting the school in Nepal is always intense and begins months before I travel. Basic resources (electricity, transport, medical supplies), if there at all, are unstable and can be quite literally swept away with a heavy monsoon or landslide.

Vaccinations (including against rabies) need to be checked and scheduled. I always travel with antibiotics, electrolytes, antihistamines and water sterilisation tablets. Trekking shoes in my hand luggage are also a must. Transport breaking down or becoming stuck in rutted or impassable roads is a real possibility, so I want my worn-in shoes, not new ones. I'm always prepared to walk for two days back to Kathmandu. (All my luggage went missing the first time around and strategic hand luggage packing saw me through well!)

The village is remote and serviced by one overcrowded bus a day outside of the monsoon season. We always discuss practicalities at this school to ensure steady progress: funds, the challenge of moving equipment over the roads, the long monsoon and the height of the river isolating the village. The unmade roads, intermittent electricity and, at best, slow Internet are still major infrastructure challenges.

Some children at the school have high aspirations and tell me that they hope to be doctors, engineers and pilots. Other children struggle to attend school, as work on the family farm is the expected priority. Some parents aspire for their children to go to the Gulf States and work just to send money home: Kamal and his team struggle (as do educators all over the world) with the challenges of engaging some parents in understanding the value of their children's education.

## Arrival in Nepal

The six-hour plus journey from Kathmandu in the jeep was hard going; the last 35 miles took over four hours as the roads are scarred by landslides. The skilled driver worked his way slowly round hairpin bends, driving steadily, and only exclaiming when we slid sideways on the steep mountain roads. I held the handrails so that when the Jeep bounced, I didn't hit my head on the frame: this I've learnt from hard experience!

Kamal and his family welcomed us in their customary way – with prayer scarves and black spicy tea. The warmth of the community was, as always, completely immersive, as the children gathered, raced around, laughed, made jokes, asked questions and rolled about excitedly.

## The Great Science Share in action

Fresh in my mind when we arrived in October was finding a moment to show the children the film and make and test the paper helicopters. You never really know what's going to happen next in Nepal and so flexibility and spontaneity are great allies.

So, with the children gathered round and curious, I slipped the iPad (charged in advance in case there was a power cut) from my bag, to show them the film. The children watched, listened, chatted amongst themselves and were intrigued. Older children translated for the younger ones.

I pulled the paper, scissors and paper clips from my bag so that we could begin our experiment. The children asked me to show the film again so that they could follow the instructions and make the paper helicopters. They spontaneously tried out different-sized helicopters and investigated what happened when they dropped them from different heights, counting down to start the timer so they could record their findings. Older children helped the younger ones; everyone joined in.

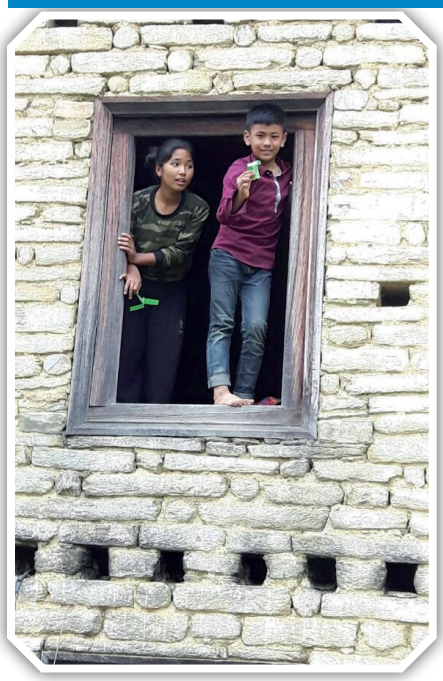
In the middle of all the activity, we still managed to capture some footage to share with the children back at The Derby High in Bury.

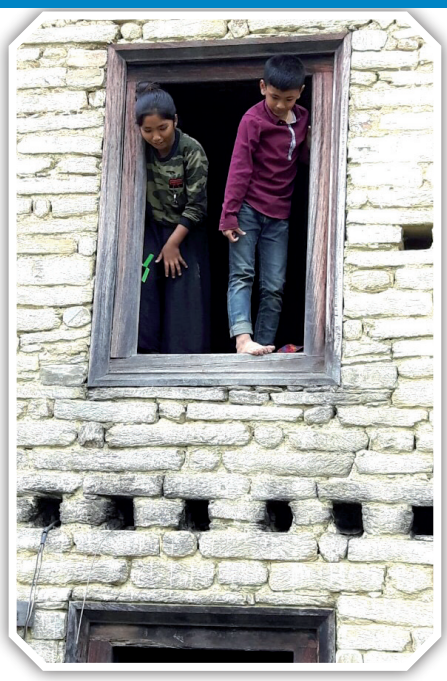
For the children in Nepal, knowing that they are thought of and connected to children in a school on the other side of the world is significant. The values that the Great Science Share has of inclusivity, non-competitiveness and collaboration fitted so well with why this was the right project to take to Nepal.

The child-led nature of it meant that they and I could ask questions without feeling that we were going to get it wrong. Of course, the Nepalese children had all sorts of questions about the Derby students: How old are they? What religion are they? How many children are at their school? Seeing the children in Bury take their science investigations seriously inspired them to begin experimenting too. Participation in the GSSfS was eye-opening and hugely empowering because they knew that people had invested in them even before I arrived.

Regarding the pupils in Bury, Lynn Provoost (Assistant Headteacher, Derby High School) says:

*'We strive to provide as many rich opportunities for our students as possible – this was no different. The opportunity that our pupils could reach out to inspire children in Nepal was amazing and something that inspired them. They leapt at the chance and came up with ideas to bring a film together, including demonstrations, explanations that profiled the science, but also who we are at the Derby! Communicating in this way engaged many pupils in designing, filming, editing and*





**Learning without limits – a hands-on practical experience generating excitement, enthusiasm and, most of all, lots of questions!**

*narrating the film. Brilliant!'*

For pupils here in England to know at an early age that they can make a positive impact on children on the other side of the world, share their science and open up windows of possibility to others was a new experience – a really great experience! I shared the footage that I brought back, which allowed them to see what they have made possible, and how it could be achieved. The project widened the horizons of children on both sides of the world.

## What was the learning?

The GSSfS commitment to collaboration and inclusion is real. Asking questions, experimenting, making discoveries, recording and sharing are transferable and meaningful to all children in all places. Being free to access and non-competitive facilitates genuine inclusivity. The full reach, potential and impact of the GSSfS are still unknown and it has the potential for so much more.

It's these lived values that enabled children in a remote village to join in when and where they could with a few bits of paper and paper clips – and all because a school in Bury caught the vision and were willing to share their science.

### Working collaboratively towards school improvement

**To find out more about Rebuilding Schools Nepal, visit:**

https://www.helenmgconsulting.com/rebuildingschoolsnepal Watch The Derby High School film at:

https://www.youtube.com/watch?v=HBCQ8_UbgPs

## Get and stay curious

Jim Collins, in *Good to Great* (Collins, 2001) talks about developing a culture of curiosity. Applying this to context as well as content helps with our investigative skills and enables appreciative enquiry into our own work, and the work of others. Broadening our networks is one of the ways in which we continue to learn. Being exposed to different ideas, ways of seeing the world, questions, investigations and possibilities gives us a different lens through which to see the world. Importantly, it can also challenge our assumptions, curiosity and possibility being great allies of learning.

This matters as much for professionals as it does for children and young people. It's easy for us to narrow our networks to people like us, who do work like us, and think like us. We can seek out new networks and opportunities to collaborate beyond our usual sphere. Widening our networks in this way can create new and unexpected opportunities. Our teaching, consulting and facilitating skills are of course transferable. Even when working with the most basic equipment, outside of our subject area, across cultures and language, we can still ask questions, provoke curiosity and endeavour to explore and discover.


### Thanks

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### Reference


Collins, J. (2001) *Good to Great.* London: Random House Publications



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