

The Beginnings

In 2004, I agreed to teach a new, week long experiential field course in northern Saskatchewan that would investigate the relationships between soils and vegetation and how they changed across a landscape or catena. I travelled far and wide to select my sites covering a range of boreal ecosystems from mixedwoods of aspen and spruce on clayey soils to jack pine eking out a life on the precambrium rock. Several months before the course was to be offered I visited my mother in Ontario who wanted to visit the McMichael Gallery in Kleinburg. I had never really made any attempt in life to go to galleries, and to be quite honest saw no place for art in my life and knew nothing about art - I was a science guy! But I agreed to go see this group of seven guys and as I stood in the gallery observing this large painting of a Canadian landscape I had an epiphany – ‘Why can’t we paint landscapes in my soil science field course?’ My next immediate thought was ‘well you can’t - you don’t know anything about art!’ I wrestled with this idea, however, for a few days trying to figure out how to include art into my science field course – is it possible to enhance student learning for science students by using art? I turned to my sister-in-law Charlene who was a high school art teacher in Ontario and began a dialogue of how I might tackle the subject. Her suggestion was to start simple and try oil pastels – they are not messy, could handle cold or rainy weather – simple and clean. She provided a few drawing guidelines for me to give to the class – rule of thirds etc and off I went. You must understand that I was stepping way out of my comfort zone, because when I teach I like to know my material intimately to feel comfortable in delivering it. Art, however, was way outside the realm of what I was trained to do but I really felt compelled to take a risk and push forward with this idea. Looking back I have wondered why I had this crazy idea. Koestler in 1964 wrote ‘The Act of Creation’ and believed that creative ideas happened when different intellectual disciplines collide. Maybe this explains why I had this creative idea – the science guy collided with art.

What Happened in that First Course?

In September of 2004, I offered the course for the first time with 12 students at Emma Lake Kenderdine Campus (ELKC). I was fortunate to have this university facility in northern Saskatchewan as a place to offer this course – a facility richly steeped in history as an art camp since 1935. Looking back ELKC was also instrumental as a place that ignited and fueled other innovative ideas by the interactions I had with other scientists, artists and staff. I also think that not only what and how we teach can impact student learning but where they learn is a key component to student learning. ELKC, for lack of a better word was a ‘magical place’ (as one artist described it to me) for learning.

During the course, students spent most of the day digging soil pits and classifying vegetation trying to understand the relationships of how the soils developed and vegetation adapted as you traversed from the upslope to the downslope on the landscape. Using scientific knowledge about water movement, hillslope processes and soil forming factors the students were able to draw connections to what they were observing in the field. In the afternoon I took the students to a landscape that had an exposed soil profile along a gravel road. After looking at it through our scientific eyes I asked them to interpret what they saw

through art – by drawing with the oil pastels. So there I was, watching my students drawing the landscape – what I had initially envisioned a few months earlier as not being possible. I was not sure, however, how the students would react to this exercise. To my surprise they really were quite accepting of ‘art’ in their soil science field course and they found the art component to be a nice change of pace and provided a different way of looking at the landscape while also giving them an opportunity to be creative. Over the 10 years I have begun to realize that this opportunity provided a whole different approach to connecting with the landscape – not one through scientific discovery but one that is more personal, that created a greater sense of place and connection to the landscape. Ken Robinson in his 2001 book ‘Out of Our Minds: Learning to be Creative’ states that “Art techniques can be powerful ways of unlocking creative capacities and of engaging the whole person.” Bringing visual art into my course engaged a different part of my student’s consciousness that initiated them to play, reflect, observe and express themselves. This merging of art and science compelled my students to use both sides of their brain – engaged the whole person. I am sure there is more to discover how combining these two disciplines impacts student learning.

It was also at ELKC that I met Paul Trottier and Cam Forrester and that friendship with two other painters with connections to Kenderdine turned into a wonderful camaraderie of guys who liked to paint ‘plein air’ – the Men Who Paint. It was been a wonderful journey for me into the art world and I look forward to what other creative ideas exist in merging science and art.