Scouting Merit Badge

My first encounter with the Scouts and surveying was several years ago when I was asked to make a presentation on surveying to a Den of Cub Scouts. The Den Mother was quite persuasive and my dinner that night hinged on my answer. Yes was easy since I didn’t like missing dinner. The next day I called my friend, John, another surveyor and the father of one of the cub scouts. We set a time and location to do our presentation and made plans to bring some equipment and mapping. Because of the age of the kids, we took the fun approach. I had a topography map for them to look at. We explained that contours close together meant a slope and you probably didn’t want to go that way. As we talked a little bit about what a surveyor does, and when interest began to fade, we put a tool belt, vest, and hard hat on one of the scouts. Everything was a little big. We took the boys outside and let them look through a level at a rod and talked about what the numbers meant. This group wasn’t quite ready for the Lenker Rod. Some surveyors aren’t ready for the Lenker Rod. John had brought the secret weapon, a robotic total station. Now we had their attention again. We talked about pacing and let them measure their paces on a 50-foot tape. They were now ready to try and pace 100 feet. We gave them hubs and a hammer and they put their initials on their best foot. We gave them hubs and a hammer and they put their initials on their best feet. We gave them hubs and a hammer and they put their initials on their best feet.

When I met with my first group on Saturday I gave them a real world scenario.

to know if I was interested in helping a few scouts get the badge. He told me it was one of the original scouting merit badges. With all that he was doing, how could I say no. He first asked if I would come to a troop meeting and do a presentation so he could see if there was any interest. Time to call John again. Through the years John and I have crossed paths as sports coaches and interested parents. His son and mine have been friends and John always volunteers. John even got me to follow him through the local chapter of CLSA session of officers. One evening we made a presentation to the boy scouts. We brought some equipment, hand tools, maps and some trade magazines with cool pictures of pyramids and canyons. The whole presentation took maybe a half an hour. A couple of weeks later, I got a call from the Scoutmaster and there were a lot of kids interested in surveying and the merit badge. It was explained that I needed to become a Merit Badge Counselor and to do this I needed to take a Child Protection class. I had done something like that as a sports coach. It was a couple of hours on a Saturday. Some people were there for scouts and some as sports coaches. We saw a video and talked about the dos and don’ts. I was given a card after completing the class. I then signed an application and submitted it to the Boy Scouts to be a Merit Badge Counselor. It is a two-year commitment and your name is put on a list for boys to call when they are interested in working on a merit badge. Each badge has one or more names. I noticed that there were several surveyors listed in my area.

I then had a call from the scoutmaster telling me he had sixteen boys interested in the scouting merit badge. Sixteen! I was going to have to figure how to do this. I suggested doing groups of four at a time. The boys are required to get the merit badge book ahead of time and look at the requirements. As part of the youth protection, I arranged for adult volunteers to meet with the boys and myself on a Saturday morning.

I went to a local park in my town. It is kind of a natural terrain with oaks and up and down topography. With the help of my son, I laid out a five-sided traverse and measured the angles and distances. I also assumed an elevation of 100 feet on one point (per the merit badge requirements) and ran elevations to the other points. We laid out a 100 foot distance on a level area for pacing (an old merit badge require

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When we did topography mapping I had the boys use a compass and rag tape. I explained how to do it with the instrument but felt locating trees and rocks would be better for them with a compass. Most had used a compass and this was something they may use in a camp situation.

One of the last requirements (that is no longer a requirement) was to locate a remote height. I picked a light standard in the area we were working. Since these boys have not had trigonometry or even geometry I explained it as simple as I could. A relationship between distance and angle. When we had finished I got a 25-foot rod to check what we had done. Now they believed me.

The last step was to sit down with the boys and draw our traverse. I had got clipboards, protractors, pencils and scales at discount store. I showed the boys which line we were going to assume as north and how to use the protractor and scale to draw the traverse to scale. When they finished I overlaid a CADD plot to check their work. A couple had to redraw their traverse but all finished. When we were finished I had a complete package from each boy proving he had done the work. It had his name and date of the work. The cover was his scaled traverse. We then returned to the truck with our equipment and found an ice chest with cold sodas. It took about four hours to do the work with four boys in a group. I was able to help sixteen boys get their Surveying Merit Badge in just four Saturday mornings. The best part was that I was invited to their ‘Court of Honor’ to see each boy formally receive his badge.

This year the requirements have changed a little. The pacing is out. The remote height is out. The boys now have to write a metes and bounds legal description. This could easily be done from their traverse work. They also have to get a deed to their property or a property of the counselor’s selection. Both are good additions.

I found the work with the boys to be easy and rewarding. They were eager to learn and having things planned out well ahead eliminated any dead time. The California Land Surveyors Association (CLSA) is just beginning a state wide Scouting Program. Please consider volunteering to be a merit badge counselor with your local CLSA Chapter. The effort is minimal and we have a chance show a large number of boys what a great career surveying can be. There is good information on the topic on the CLSA Website (www.californiasurveyors.org). When I did my first presentation to the Boy Scout Troop I asked, does anybody here like computers? Every hand went up. The kids are eager to see how they can make a living and still have fun. Whether it’s working outside on a crew, drawing maps on a computer in an office or running a business, there is something they will enjoy. ❖