



Cub Scout/Webelos Engineering Merit Badge Requirements

Do BOTH of the following:

- Talk to an engineer, surveyor, or architect in your area about the different occupations in engineering. Create a list that tells what they do
- Draw a floor plan of your house, or draw a floor plan of a building on campus here at USF (one floor only, and do it to the best of your ability). Include doors, windows, and stairways.

Do FOUR of the following: (We suggest doing #'s 3,4,5, and 7)

1. Visit a construction job. Look at a set of plans used to build the facility or product. Tell your Webelos den leader about these. (Get permission before you visit.)
2. Visit a civil engineer or surveyor to learn how to measure the length of a property line. Explain how property lines are determined.
3. Tell about how electricity is generated and then gets to your home.
4. Construct a simple working electrical circuit using a flashlight battery, a switch, and a light.
5. Make drawings of three kinds of bridges and explain their differences (use the back of this paper to draw on and construct the model at the Douglas Jamerson Elementary School exhibit). Construct a model bridge of your choice.

**Should at any time you have a question about the requirements or where the location is that these can be completed, simply ask any volunteer or director and they will be able to direct you. A map of the area is located on the Expo flyer.

6. Make a simple crane using a block and tackle and explain how the block and tackle is used in everyday life.
7. Visit the Douglas Jamerson Elementary School, Center for Math and Engineering booth, and construct multiple polyhedrons, then discuss with the booth operator and counselor about the different types of structural design.
8. While you are a Webelos Scout, earn the Cub Scout Academics belt loop for Mathematics.

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