

ENGINEERING CAREER ACHIEVEMENT AWARD

Engineering Achievements

Name: _____

(Certification: Adult leaders must initial and date each completed achievement.)

Do nine of the following:

1a. Build a switch magic project.

1b. Display and demonstrate your project at a post meeting or in another public place.

Completed _____

2a. Build a small Jacob's ladder (high-voltage arc).

2b. Demonstrate your project at a post meeting, community group, class, or other group meeting.

Completed _____

3a. Learn soldering techniques by building a self-contained, solid-state signal injector that will enable you or another person to troubleshoot the simple way.

3b. Demonstrate what you have learned about soldering to your post, another post, a community group, or another group.

Completed _____

4. Build an ohmmeter that will show a person's grip strength and display it.

Completed _____

5a. Build a model of a space station.

OR

5b. Make a tabletop display on the concept for a space station. Show the display at your post or another group meeting.

Completed _____

6. Tour a manufacturer of soft and/or hard goods, such as automobiles, radios, TVs, paint, oil and gas, batteries, etc. Share what you see and/or learn with other Explorers or students.

Completed _____

7. Learn how to construct electronic dice in which, when the "roll" button is depressed, all 14 LEDs go on, and then a "roll-down" similar to the effect obtained when regular dice are thrown.

Completed _____

8. Learn and teach other Explorers, students, or youth groups how to construct a model bridge out of basswood and glue.

Completed _____

9a. Either participate in or organize and lead a contest to construct a paper airplane and test it in three areas: weight, time aloft, and aesthetic design.

OR

9b. Either participate in or organize and lead a contest to build vehicles propelled by a mouse trap spring or a rubber band.

Completed _____

10. Design a playground set, bench area, garden trail, pedestrian bridge, or pavilion for a park, school, retirement home, etc. If possible, build your project.

Completed _____

11. Tour a construction site with an engineer. Discuss various jobs done on the site. What are the steps in the construction process? What role did a civil engineer play? Other engineers? Ask about the inspection process.

Completed _____

12. Explain the work of six of the following types of engineers: civil, mechanical, chemical, electrical, industrial, agricultural, aeronautical, mining, astronomical, metallurgical, nuclear, biomedical, ceramic, and petroleum.

Completed _____

13. With your Advisor's or teacher's advice, select a subject to research in engineering. Research publications and interview experts. Tell what you learned and where you got the facts.

Completed _____

14. Visit five Internet Web sites to discover three new trends in computers or computer programming. Or find out about five engineering professional organizations. Write about the three new trends or the five organizations in a two-page report for your adult leader.

Completed _____

15. Obtain information on five colleges or universities that offer engineering as a major course of study. Prepare a presentation for your post that includes (a) what engineering programs are offered, (b) what the admission requirements are, and (c) what the graduation requirements are for a bachelor's degree. Have the college mail information to you so you can share it with other Explorers, high school students, or another group.

Completed _____

16. Attend a regional or national engineering conference as a staff member or participant.

Completed _____

Resources

Explorer Leader Handbook (No. 34637A) and Learning for Life Web site (www.learning-for-life.org)

Qualifying Achievements

Because of the design and flexible nature of the program, Advisors and adult leaders are permitted a reasonable degree of latitude in substituting appropriate achievements that serve to meet the qualifying requirements for the Learning for Life Career Achievement Award.

Requirements

Explorers or Learning for Life participants can earn any Career Achievement Award in one or all of the 12 career clusters. To earn a Career Achievement Award, the candidate must provide *50 hours of community service and complete any nine career achievements*. The Explorer post Advisor or adult high school Learning for Life group leader certifies that each Explorer or Learning for Life participant has satisfactorily performed 50 hours of community service and verifies that each candidate has completed at least nine achievements within the career cluster.