

Scout's Name: Unit:

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You will be completing the requirements for the engineering merit badge by filling out this work

sheet. You will still need to read your merit badge book!

1. Select a manufactured item in your home:

Under adult supervision and with the approval of your counselor, investigate how and why it works as it does. Write your observations below.

What sort of engineering activities were needed to create it?

2. Select an engineering achievement that has had a major impact on society.

Research this achievement using resources such as the Internet (with your parent's permission), books, and magazines.

Who were the engineers that made this engineering feat possible?

What were the special obstacles they had to overcome?

How has this achievement influenced the world today?

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3. Explain the work of six types of engineers.

Pick two of the six and explain how their work is related.

4. Visit with an engineer and ask him or her the following.

Record the answers in the space provided.

What work does the engineer do?

What tools does the engineer use?

Find out about a current project.

What is the engineer's role in the project?

How is the engineer's work done and how are results achieved?

Ask to see the report(s) that the engineer writes concerning the project.
What did you notice about the report(s)?

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5. (a) Use the systems engineering approach to make step-by-step plans for your next camp out.

What are your assets?

What are the requirements?

List alternative ideas for such items as program schedule, campsites, transportation, and costs.

Determine which are your best ideas.

Tell why you made the choices you did and what improvements were made.

6. (d) Using materials.

Do experiments to show the differences in strength and heat conductivity in wood, metal, and plastic. Record your findings below:

On your own, do ONE

of the following requirements: 6(a), (b), (c), (e), or (f). Record your findings below:

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7. What does it mean to be a registered Professional Engineer (PE)?
What are the types of engineering work for which registration is most important?

8. Study the Engineer's Code of Ethics. Explain how it is like the Scout Oath and Scout Law.

9. Find out about three career opportunities in engineering.

Pick one and research the following:

What education is required?

What training is required?

What experience is required?

Why might this profession interest you?