

Engineering
Merit
Badge

Merit Badge Midway

Lesson

1

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February

4,

2012

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Do any of you know an engineer?

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What do engineers do?

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Brainstorm the engineering-systems approach (a.k.a. the design process) by discussing the steps to design a desk. In groups, plan a camp out using the engineering-systems approach (fill in the blanks on the worksheet). (Requirement 5a)

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Complete Requirement

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by having them fill in the worksheets on engineering licensure.

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Have the scouts pick three career opportunities for Requirement

9

and write them on the worksheets.

Assignment:

Complete

the

following

for

next

week.

1. Choose a subject for an engineering achievement that has had a major impact on society (Requirement
- 2). The final report for this engineering achievement will be due at lesson 3.
2. Find out about the education, training, and experience required for one of the career opportunities you listed for Requirement
9. Record your answers on the worksheet.
3. Read your merit badge book (pp. 23ñ35) about the different types of engineers (we will discuss this next time).

Lesson

2
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February
11,
2012
-Room
229
Engineering
Hall

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Follow up on homework assignments from the first lesson:

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Have they chosen a subject for their report on a significant engineering achievement?

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Collect the worksheets to review Requirement 9.

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What are the types of engineers? What kind of work do they do? In class: pick two of these and explain how they are related. (Requirement 3, pp. 23ñ35)

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Divide into groups.

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Half the class (typically two groups) will perform experiments to show the differences in strength and conductivity for wood, plastic, and metal. (Requirement 6d).

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The other half will discuss the engineering code of ethics (p. 89). Each scout will fill in the worksheet comparing the code of ethics to the Scout Oath and Scout Law. (Requirement 8)

Midway through switch groups.

Assignment:
Complete
the
following
before
the
last
session.

1. Complete Requirement
1. You will discuss your findings at the last session.
2. Complete Requirement
2. You will discuss this at the last session.
3. Complete option a, b, c, e, f, or g from Requirement
- 6.
4. Complete any remaining requirements except for Requirement
- 4, which we will be completing
- on the last day.

Lesson
3
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February
18,
2012

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Interviews with an engineer (Requirement
4).
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Engineering reports (Requirement
2).
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Discussion with counselors (Requirement
1, Requirement
6X).

