



Boy Scout Nova Award Whoosh!



Boy Scout Nova Award for Engineering

1. Choose A or B or C and complete ALL the requirements.
 - A. Watch about three hours total of engineering-related shows or documentaries that involve motion or motion-inspired technology. Then do the following:
 - i. Make a list of at least two questions or ideas from what you watched.
 - ii. Discuss two of the questions or ideas with your counselor.
 - B. Read (about three hours total) about motion or motion-inspired technology. Then do the following:
 - i. Make a list of at least two questions or ideas from what you read.
 - ii. Discuss two of the questions or ideas with your counselor.
 - C. Do a combination of reading and watching (about three hours total). Then do the following:
 - i. Make a list of at least two questions or ideas from what you read and watched.
 - ii. Discuss two of the questions or ideas with your counselor.

Requirement 1

I chose option: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C	
Name(s) of things I watched and/or read: _____	
<input type="checkbox"/> i. I made a list of at least two questions from what I read and watched.	
<input type="checkbox"/> ii. I discussed the ideas and questions with my Counselor	
_____	_____
Counselor's okay	Date

2. Complete ONE merit badge from the following list. (Choose one that you have not already used toward another Nova award.) After completion, discuss with your counselor how the merit badge you earned uses engineering.

- | | | |
|---------------------|---------------------------|------------------|
| Archery | Electronics | Railroading |
| Aviation | Engineering | Rifle Shooting |
| Composite Materials | Inventing | Robotics |
| Drafting | Model Design and Building | Shotgun Shooting |

Requirement 2

I completed the Merit Badge for _____	

_____	_____
Counselor's okay	Date



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3. Do ALL of the following:
 - A. Make a list or drawing of the six simple machines.
 - B. Be able to tell your counselor the name of each machine and how each machine works.
 - C. Discuss the following with your counselor:
 - i. The simple machines that were involved with the motion in your chosen merit badge (Hint: Look at the moving parts of an engine to find simple machines.)
 - ii. The energy source causing the motion for the subject of your merit badge
 - iii. What you learned about motion from earning your merit badge

Requirement 3

<input type="checkbox"/> A. I made a list or drawing of the six simple machines <input type="checkbox"/> B. I told my counselor the name of each simple machine and how it works. <input type="checkbox"/> C. I discussed with my Counselor: <ul style="list-style-type: none"> <input type="checkbox"/> i. The simple machine(s) involved with my Merit Badge <input type="checkbox"/> ii. The energy source for my Merit Badge <input type="checkbox"/> iii. What I learned about motion from my Merit Badge.
<div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div style="border-top: 1px solid black; width: 60%;"></div> <div style="border-top: 1px solid black; width: 20%;"></div> </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> Counselor's okay Date </div>

4. Choose A or B and complete ALL the requirements.
 - A. Visit an amusement park. Then discuss the following with your counselor:
 - i. The simple machines present in at least two of the rides
 - ii. The forces involved in the motion of any two rides
 - B. Visit a playground. Then discuss the following with your counselor:
 - i. The simple machines present in the playground equipment
 - ii. The forces involved in the motion of any two playground fixtures

Requirement 4

I chose option: <input type="checkbox"/> A <input type="checkbox"/> B
I visited an amusement park or playground and: <ul style="list-style-type: none"> <input type="checkbox"/> i. I discussed the simple machines present <input type="checkbox"/> ii. I discussed the forces involved in the motion
<div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div style="border-top: 1px solid black; width: 60%;"></div> <div style="border-top: 1px solid black; width: 20%;"></div> </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> Counselor's okay Date </div>



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5. Do the following:
- A. On your own, design one of the following and include a drawing or sketch: an amusement park ride OR a playground fixture OR a method of transportation.
 - B. Discuss with your counselor:
 - i. The simple machines present in your design
 - ii. The energy source powering the motion of your creation

Requirement 5

<p>A. I designed and made a drawing of:</p> <ul style="list-style-type: none"><input type="checkbox"/> Amusement park ride OR<input type="checkbox"/> Playground fixture OR<input type="checkbox"/> Method of Transportation <p>B. I discussed with my counselor</p> <ul style="list-style-type: none"><input type="checkbox"/> i. The simple machine(s) in my design<input type="checkbox"/> ii. The energy source powering my design <p>_____</p> <p>Counselor's okay _____ Date</p>
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6. Discuss with your counselor how engineering affects your everyday life.

Requirement 6

<p>I discussed with my Counselor how engineering affects my everyday life.</p> <p>_____</p> <p>Counselor's okay _____ Date</p>
